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MEMOIRS

OF THE

TORREY BOTANICAL CLUB.

Vol. IV. No. 3.

On the Collections of Mr. Miguel Bang in Bolivia.—Part II.

By Henry H. Rusby.

CORRECTIONS, ADDITIONS AND NOTES REFERRING TO PART I.*

The examination of additional material communicated by Mr. Bang since the publication of the first part, and an opportunity for critical examinations at the Kew Herbarium, have made possible the clearing up of many doubtful points. Several errors have also been detected by the author or by the correspondents cited, and some of the descriptions of new forms are perfected through the receipt of the parts missing when the original descriptions were drawn up.

Several numbers of the first thousand inadvertently omitted from Part I. are here inserted.

863. Published as "*Berberis Boliviana* Lech.?" is

Berberis divaricata sp. n.

Stem stout, light gray-brown, striate, the branchlets nearly divaricate, golden brown, slightly shining, blackish-dotted, the internodes 2.5–3 cm. long; spines 3, barely united, slightly flattened, channelled, light brown, shining, very pungent, the middle about 1.5 cm. long, the lateral only a little shorter; scales closely sheathing, 5 mm. long, broadly triangular, pungent, keeled and with a pair of ribs converging near the apex; leaves 3 or 4 together, the largest nearly 3 cm. long by 1 cm. broad, inequilaterally oblanceolate, the base cuneate, sessile, the apex cuspidate, thick, minutely revolute, the midrib and 6–8 pairs of principal

*Mem. Torr. Bot. Club, III., Part 3.

veins prominent, reticulate, glabrous both sides; raceme solitary, sessile, about 8 (5–10) flowered, pendulous, the rhachis and pedicels (1 cm. long) blackish when dry, the bracts subulate, 3 mm. long; sepals about 3, petals about 6 mm. long; fruit not seen.

The same collected by Pearce, at Pelechuco, Peru.

857. *Berberis rectinervia* Rusby. This now appears to me distinct from Pearce's La Banca specimen, which has spines 3-parted above the base, the leaves spiny-toothed and with a different venation.

826. *Vochysia Bolivana* Rusby. Fruit characters, taken from a specimen collected by Pearce at Moro, 4000–5000 feet altitude, and deposited at Kew, are as follows:

24 mm. long by 8–10 mm. broad, oblong, both ends rounded, angled and channelled, rugose and papillose, blackish, on a peduncle more than half as long.

683. Published as "*Caopia tomentosa* (R. and P.) Kuntze, provisionally" is

CAOPIA CRASSA sp. n.

Except upper surface of leaf, entire plant densely ferruginous; branchlets angular, stout; petioles stout, channelled, 1–1.5 cm. long; blade 7–15 cm. long, 2.5–5 cm. broad, lanceolate, base rounded, apex acuminate, thick and rigid, faintly revolute, midrib strong and prominent below, principal veins 15–18 pairs, reticulate, above smooth and shining, yellowish green when dry; panicles peduncled, 5–7 cm. broad, 3–4 cm. long exclusive of peduncles; pedicels very stout, strongly angled, 4–5 mm. long, articulated to branchlets 1.5–2 mm. long, the articulation swollen; sepals oval, obtusish, 8 mm. long, 5 mm. broad, very thick, smooth and shining within; petals about as long, broader, densely pilose-fringed, spotted only above the middle; squamae small, thick and fleshy, triangular-ovate, pilose; ovary broadly ovoid, papillose, the styles, just after the fall of the petals slightly longer than the ovary.

Very near *C. Brasiliensis*, which has leaves less shining above and oblanceolate sepals. The same as Rusby's 1810; also collected by Pearce at Sandillani.

741. CLUSIA RAMOSA sp. n.

Much branched, the branchlets recurved, dark reddish brown; petioles 5–8 mm. long, boat-shaped, the upper partly enfolding the buds; blade of larger leaves 10–15 cm. long, 5–7 cm. broad, the upper rapidly diminishing in size, obovate, the base obtusish, the apex beautifully rounded, very thick, the margin sharply revolute, midrib and veins very prominent below, the latter 35–50

pairs, anastomosing about 1 mm. from the margin, glabrous both sides, pale or glaucous above, flavescent beneath in drying; peduncles 1–2 cm. long, panicle proper 3–4 cm. long and broad, rather few-flowered; bracts resembling the upper petioles, but shorter, thinner and lighter colored; flowers sub-sessile, in threes, the mature obovoid-globose buds about 4 mm. in diameter; staminate flowers only seen; anthers distinct, quadrangular in transverse section, narrowed downward, the filaments for the most part united into a conical or oblong mass. Very near *C. Criuva* Camb. One collection by Pearce at Santa Cruz is possibly the same.

Unduavi, March, 1891.

390. Distributed and enumerated as *Marcgraavia peduncularis* Poepp. Mss. is *Norantea peduncularis* Poepp. ex Wittm. Mart. Fl. Bras. Marc. 238.

953. Published as probably a *Malveopsis* is determined by Mr. E. Baker to be *Modiolastrum malvaefolium* (Griseb.) R. Schum. Mart. Fl. Bras. **13**: 3, 277 (*Modiola malvaefolia* Griseb. Symb. Fl. Arg. 45).

114. *Malva parviflora* L. Pl. Nov. Am. Acad. **3**: 416. Vic. La Paz. 10,000 ft. 1889.

409. *Pavonia paniculata* Cav. Diss. **3**: 135. *pl. 46. f.* 2. Yungas, 1890.

545. *Pavoma Typhalea* (L.) Cav. Diss. **2**: 134. Yungas, 1890= Rusby's 1487.

647. *Gossypium maritimum* Todaro, var. *polycarpum* Todaro, Rel. Cult. Cott. *pl. VIII.* Yungas, 1890=Rusby's 659.

931. *Ayenia Boliviana* Rusby. The fruit characters, taken from Mandon's No. 1508, Herb. Kew, are as follows:

Depressed-globose, 4 mm. broad, 3 mm. long, deeply 5-lobed, light brown, finely pubescent, coarsely and sparsely green-muricate.

935. *Brittonella pilosa* Rusby, Bull. Torr. Bot. Club, **20**: 430. Vic. Cochabamba, 1891.

315. *Oxalis medicaginea* HBK. Nov. Gen. **5**: 241. Yungas, 1890.

348. *Erythrochiton Brasiliensis* Nees et Mart. Nov. Act. Nat. Cur. **11**: 170. *pl. 25* (1823).

848. Published as "*Trichilia ovalis*" is GUAREA OVALIS.

829. *Alzatea verticillata* R. & P. Fl. Per. **3**: 20. *pl. 241.* Songo, Nov. 1891.

987. Published as "*Cardiospermum Halicacabum* L." is *C. Corindum* L. Sp. Pl. ed. 2, 526.

879. Paullinia Boliviana Radlk. sp. n.

In sectione "Caloptilon" (capsula trialata, alis endocarpii ingressu chartaceis persistentibus, sepalis 5 liberis) quodammado affinis *Paulliniae acutangulae* Pers. Pube molliore vel subnulla induta; rami e triangulari 3–6-sulcati, corpore lignoso simplici; folia 5-foliolato-pinnata; foliola elliptico-lanceolata, supra medium remote serrato-dentata, punctis lineolisque pellucidis ramificatis ornata; stipulae lineari-subulatae; thyrsi solitarii, graciles, puberuli; fructus trialatus, obovatus, minor; seminis testa glabra.

Forma 1, *genuina*. Molliter pubescens. Cochabamba 1890, Bang. n. 879. (Serjania sp. Rusby in Enum. p. 17, excl. obs. "very near 413," quae *Serjania reticulata* Camb).

Forma 2, *glabrescens*. Pube vix ulla nisi in foliis circa articulationes et ad nervos adspersa. Guanai 1886, Rusby n. 529. (*Paullinia* sp. Britton in Bull. Torr. Club, 16: 191).

923. Schinus diversifolia sp. n.

Glabrous. Branchlets 2–3 dm. long, slender, patulous, at length bright red; petioles 1–2 cm. long, narrowly margined, the leaflets 5–9, the upper frequently not at all or imperfectly separated from the terminal, narrowly decurrent upon the rhachis, very unequal, the lateral 1–2.5 cm. long and 3–8 mm. broad, the terminal 1.5–4 cm. long and 5–15 mm. broad, outline irregular, the lateral mostly oblong to slightly oblanceolate, the terminal lanceolate to angularly ovoid, the base abruptly tapering, the apex rounded but minutely mucronate, thickish, pale, the veins obscure; panicles only 2–4 cm. long and broad, lax, the rhachis flexuous; pedicels slender, one and one-half to twice the length of the flower, which is minute, about 2 mm. broad when fully expanded.

Vic. Cochabamba, 1891. The leaves said to possess medicinal virtues.

756. Published as "*Caesalpinia rosulata* sp. n." is regarded by Dr. Taubert as identical with *C. Fisheriana*, and I defer to his judgment.

822. Published as "*Erythrina Cristi-Galli* L." Dr. Taubert refers to *E. falcata* Benth.

936. Published as "*Stylosanthes hamata* (L.) Taubert?" is:

Stylosanthes Bangii Taub. sp. n.

Caulis herbaceus vel basi sublignosus, simplex vel parce ramosus, angulatus, hispido-setosus insuperque praesertim superne villosulus; stipulae striatae, vagina processus subulatos fere duplo

superante; folia rhachide brevissima, foliatis vix petiolulatis lanceolato-oblongis, apice mucronatis, subsetoso-ciliatis, utrinque sed supra obsolete hispidis; spicae pauciflorae bracteis primariis hispido-setosis; seta bracteam secundariam bifidam ciliatam plerumque aequans; legumen plerumque biarticulatum, articulo inferiore tamen raro plane evoluto leviter pubescente, superiore glabro, reticulato-nervoso, rostro $\frac{1}{3}$ longitudinis coronato.

Radix crassa lignosa multiceps. Caules 5–20 cm. altos, setis inferne incrassatis erectis vel subpatentibus praecipue ad angulos hispidos emittentes. Stipulae parce subhispido-setosae insuperque parce villosulae, vagina 6–7 mm. longa saepius purpureo-colorata, processibus 3–4 mm. attingentibus. Petioli pars libera subsetoso-hirsuta, processus superans. Folia rhachide 1.5 mm. longa; foliolis rigidis, maximis 13 mm. longis, 3.5 mm. latis, supra obscure, subtus prominenti-nervosis, utrinque, subtus praecipue, tribis raris hispidis nodis insidentibus munitis, supra tamen saepe subglabris. Spicae 1–1.5 cm. longae; bractea primaria stipuliformis, saepissime foliolum terminale gerens, plerumque purpureo-colorata; secundaria hyalina, oblonga, bifida, margine ciliata, 3.5–4 mm. longa, 2.5 mm. lata; seta prophylla lineari-lanceolata 3.5 mm. longa aequans, rarius superans, parce plumosa. Calycis tubus parte stipuliformi striata 6 mm. longa, ampliata cum dentibus subciliatis 3 mm. attingente. Corolla flava tubi calycini parte ampliata duplo longior. Legumen articulo inferiore vix 2 mm. longo, superiore (cum rostro uncinato recurvo) 4.5 mm. longo, 2.5 mm. lato, utrinque longitudinaliter bicostato.

Habitat in Bolivia, Vic. Cochabamba.

Obs. Stirps inter sect. *Styposanthes* species *S. sympodiali* Taub. affinis, leguminis articulo superiore glabro aliisque notis distat.

780. Read "Escallonia Mandoni."

337. *Drosera uniflora* Willd. En. Hort. Berol. 340.

533 and 615, a, published as "*Micrampeles macrocarpa* (Britton) Rusby" is *M. Rusbyi* Greene, Prof. E. L. Greene (Erythea, 1: 138) having reminded us that the former name is pre-occupied.

171. *Caiophora* sp. n. Soon to be described by Urban and Gilg.

406. Begonia Antioquiensis (A. DC.) *Casparya Antioquiensis* A. DC. Ann. Sci. Nat. (IV.) 11: 161 (1859). Compared with the type, Triana's 3041, Antioquia, New Grenada.

18. Published as *Opuntia*, is *Cereus melanotrichus* K. Sch., according to Dr. Schumann.

175. *Cereus lasianthus* K. Sch., according to Dr. Schumann.

176. *Cereus lasianthus* K. Sch. Soon to be described by Dr. Schumann.

177. A mixture of Cacti which cannot well be corrected here.

384. *Sabicea cinerea* Aubl. Pl. Guian. 1: 192. *pl.* 75. Yungas, 1890.

510. *Cinchona Pahudiana* Howard, Nuev. Quin. *pl.* 21.

418. Published as *Malanea grandis* Rusby, is ELAEAGIA GRANDIS, Rusby.

355 and 858. *Psychotria* (*Mapourea*) *niveobarbata* Muell. Arg. in Mart. Fl. Bras. 6: 6, 401. Yungas, 1890, and Songo. Nov. 1891. The same as Glaziou's Rio, 7684.

404. *Psychotria Bangii.* Fruit 4 mm. long, the base slightly contracted, conspicuously sulcate.

376. * *Spermacoce tenuior* L. Sp. Pl. 102?

473. SPERMACOCE BROWNII sp. n.

Stems slender, erect or reclining, 2 to 5 dm. long, light brown, deeply 4-grooved, above sparsely hispidulose-pubescent, the internodes 5–7 cm. long; branches few and slender; stipules rich brown, the united portion ample, 5 mm. long by 7 mm. broad, the laciniae 5 mm. long, very slender; leaves tapering into a very short margined slightly ciliate petiole, the larger 6–8 cm. long by 2–2.5 cm. broad, the floral 3–4 cm. long by 4–7 mm. broad, oblong, tapering to both ends, but scarcely acute, thin, pale, the midrib and 6–7 pairs of primary veins slender but very prominent, sub-longitudinally disposed, both sides rather sparsely pubescent, the pubescence slightly harsh; whorls compact, many-flowered, 1–1.5 cm. broad; floral scales narrowly linear, white, unequal, but approximately as long as the flowers; calyx-tube obconical, in flower about 2 mm. long, the lobes 1 mm. long and two-thirds as broad, enlarging in fruit, ovate, obtuse, densely hirsute; corolla but little exceeding the calyx, the oblong lobes nearly twice the length of the narrow blackish tube, whitish-yellow, tufted at the apex; anthers ovate-oblong, a little longer than broad; seeds oblong-linear, slightly curved, 2 mm. long. Near *S. scabiosoides* C. & S.

945. *Mitracarpum hirtum* (Sw.) DC. Prod. 4: 572. (*Spermacoce hirta* Sw. Obs. 45.)

949. Published as "Diodia," is RICHARDIA (?) COLDENIOIDES sp. n.

Stems prostrate, numerous, and densely massed, sharply angled, purplish, densely beset with rather long white stiff hairs, the internodes about 1 cm. long; sheath of stipules green, 2 mm. long by 4 mm. broad, the few yellowish-white slender setae 3 mm. long; leaves closely sessile, pale green, 5–8 mm. long by 2–3 mm. broad, lanceolate, tapering from the base, scarcely acute when

* Kindly determined by Mr. N. E. Brown.

spread out, rigid, revolute, above nearly glabrous, below setose, densely massed about the flowers; calyx-tube globoid, 1 mm. long, a little broader, teeth 4, triangular-subulate, acute, as long as the tube, ⅓ as broad, densely setose, the intermediate ones obsolete; corolla glabrous, the tube very short, the lobes ovate, obtuse, scarcely 1 mm. long; anthers broadly ovate; mature fruit not seen, apparently hispid, separable from the base into 2 nutlets without leaving an axis.

937. Published as "Borreria" is STAELIA FILIFOLIA sp. n.

Root vertical, stout, woody, stems several to numerous, 5–10 cm. long, slender, ascending, sparingly branched, at first densely, at length sparsely leafy, scabrous; sheaths of the stipules brown, 2 mm. broad, .5 mm. long, a transverse ridge at the middle portion, the few setae white, very slender, 1–2 mm. long; leaves filiform, acute, 3–8 mm. long, grayish-hispid; verticils 5–8 mm. broad; calyx-tube hemispherical, 1.5 mm. broad, densely hispid, the two principal teeth 2 mm. long, setiform, the others obsolete or nearly so; corolla-tube cylindraceous, slightly dilated upward, equalling the calyx-teeth, the lobes ⅔ as long, oblong-lanceolate, obtuse; anthers oblong, nearly 1 mm. long, ½ as broad. Mature fruit not seen. Very near *S. thymoides* C. & S.

247. Published as "*Vernonia paucifolia* sp. n." is V. HERBACEA (Vell.) (*Chrysocoma herbacea* Vell. Fl. Flum. 330; 8: *t. 29* (1825) = *V. obovata* Less. Linnaea (1829) 279).

86. Published as "*Stevia compacta* Benth.?" is STEVIA BANGII sp. n.

Stellate-puberulent throughout; root consisting of many slender straightish dark-colored branches from a short woody crown; stems 1 to several, reddish, terete, slender, and slender-branched from near the base, the branches ascending, internodes 3–4 cm. long; leaves 1.5–2.5 cm. long by 2–10 mm. broad, from lance-linear to broadly lanceolate, obtuse, tapering into a petiole-like base, the larger 3-nerved and coarsely serrate, the smaller 1-nerved and entire, somewhat rigid; heads mostly 5–7 together; involucre 2 mm. broad, 7 mm. long, the scales linear-oblong, acutish; pappus-bristles about 12, about equalling the corolla-tube or longer, purplish, serrate; corolla-tube reddish-yellow, 5 mm. long, 7 mm. broad, cylindrical, the lobes flesh-color, 2 mm. long, lance-ovate. Mature akene not seen.

= Rusby's 1613, but not Mandon's 244.

611. Published as "*Stevia stenocephala* Sch. Bip.?" is STEVIA NEGLECTA sp. n.

Stems tall, coarse and weak, widely branching, terete, bright red, above minutely and sparsely pubescent, foliage scanty, tran-

sient, drying blackish; larger leaves 5 cm. long by 2 cm. broad, passing gradually into the floral, which are 1 cm. long by 5 mm. broad, lance-ovate, sessile, blunt, obscurely coarse-toothed to entire, thin, pale beneath; heads at length solitary and loosely racemed along the branches of the panicle, erect on peduncles 1 mm. long; involucre 5 mm. long by 1 mm. broad, the scales lance-oblong, acute, finely many-nerved; mature akene black, narrowly linear-oblanceolate, sharply angled, the edges serrulate, 4 mm. long; narrow lower portion of corolla-tube blackish, 1 mm. long, hirsute, the dilated portion 2 mm. long, twice as broad as the lower glabrous, or nearly so, yellowish white, the lobes similar, oblong, 1 mm. long, spreading or reflexed; pappus reduced to a circle of short teeth.

Not the same as Matthews' 1130 or 1335, nor Mandon's 244, though it resembles all of them.

260. This has since been compared with Mandon's type of *Stevia Boliviensis*, and found to agree perfectly. It has a rhizomatous base.

868. *Addisonia virgata* Rusby, Bull. Torr. Bot. Club, **20**: 432. Vic. Cochabamba, 1891.

254. Distributed as "*Eupatorium Guadalupense?*" is EUPATORIUM STIPULIFERUM sp. n.

Stems slender, widely branching, terete, whitish, above puberulent; leaves ternate (or opposite?), petioles 1.5–2 cm. long, very slender, the base gradually dilated and 3-ribbed, bearing in their axils several small leaves (5 mm. long) similar to the normal ones, which are 3–7 cm. long, 3–5 cm. broad, truncate to cordate, and slightly decurrent on the petiole, acuminate or acute, coarsely toothed, the teeth short, unequal, blunt, thinly membranaceous, slenderly 3-nerved from the apex of the petiole, sparingly veined, sparsely and very minutely strigose both sides, dark above, pale beneath; inflorescence paniculate, the branches leafy-bracted, panicles 10–15 cm. long, 5–7 cm. broad, pyramidal, lax; heads on capillary peduncles 3–5 mm. long, the latter subtended by subulate bracts, the heads 5 mm. long; scales of the involucre about 8, with green midrib and 2–4 nerves, the outer lanceolate, acuminate and pungent, the inner oblong to oblanceolate, less acute, puberulent like the pedicels; mature akene with pappus nearly double the length of the involucre; akene black, 2 mm. long, obconical with acutely tapering base, very acutely angled, the angles hispid; pappus and corolla 3 mm. long, the latter regularly cylindrical.

= Matthews' 1369, and Spruce's 3914.

Species near *E. conglobatum* DC.

867. *Eupatorium longipetiolatum* Sch. Bip. This was also collected by Matthews, Chachapoya, No. 3062.

696. Distributed as "*Willoughbya cordifolia* (L) Kuntze" is W. MICRANTHA (H.B.K.) (*Mikania micrantha* H.B.K).

100. *Erigeron spiculosum* H. & A. Bot. Beech. Voy. 1: 32. Vic. La Paz, 10,000 ft., 1889.

802. Perhaps *Baccharis caespitosa* Pers. Syn. 2: 425. A specimen collected by Ball is doubtfully so named at Kew.

941. Published as "*Aster Vahlii* (Gaud.) H. & A.?" proves to be *Baccharis juncea* Desf. Cat. Hort. Par. Ed. 3, 163.

178. *Pluchea odorata* Cass. var. (?) FERRUGINEA n. var.

A very stout compact densely leafy shrub, upper leaf surfaces scabrous, otherwise ferruginous, heads 6 mm. long and broad, the scales broadly ovate with dark tips, the akenes very dark brown, linear-oblong, 1 mm. long.

261. *Gnaphalium leptophyllum* DC. Prod. 6: 226.

977. VIGUIERA (?) GLUTINOSA sp. n.

Habit unknown; upper portion of stem, lower leaf-surfaces, peduncles and involucres strongly glutinous: stems (or branches) elongated, slender, crooked, greenish brown, coarsely angled; leaves alternate, 7–13 cm. long, 1.5–3 cm. broad, lance-oblong, somewhat inequilateral or falcate, tapering into a margined petiole 1 cm. long, apex mostly acute, entire, very thick and coriaceous, slightly shining, drying yellowish green, the yellow midrib prominent below, slightly impressed above, the primary veins strongly curved, reticulation prominent beneath; heads solitary, long-peduncled in the upper axils, the involucre hemispherical, a little more than 1 cm. long, 1.5 cm. broad, the receptacle convex, the nerved scales in about three rows, the outer lanceolate, coriaceous and appressed below, herbaceous above, approximately as long as the inner, the latter, which belong to the rays but do not enfold them, appearing 3-lobed by a broad hyaline lacerate appendage upon either side, these much surpassed by the acuminate, ciliate herbaceous terminal portion; disk-scales only partially and loosely enclosing their flowers, one-third shorter than the latter, strongly keeled, spatulate, the lateral fringed hyaline lobes much larger than the terminal, which slightly surpasses them; the deep yellow rays 3 cm. long (including the rudimentary pilose akene which is 7 mm. long), 8 mm. broad, regularly oblong, minutely 3-toothed, bearing 2 principal and 7 or 8 secondary nerves, neutral; disk flowers (the outer strongly curved), 13 mm. long, including the densely hirsute ovary, which is 6 mm. long, the corolla regularly funnelform, the triangular, spreading or reflexed teeth $\frac{1}{5}$–$\frac{1}{3}$ the

length of the tube; anthers 3 mm. long, blackish, the base slightly sagittate, the whitish triangular cartilaginous appendages partly folded; style-branches ⅔ the length of the lower portion, including the triangular acute appendage, oblanceolate, pubescent; base of style bearing a dark bulb-like enlargement which disarticulates from the akene; mature akene not seen, apparently the outer narrowly 3–winged, the inner narrowly 2–winged; pappus a single seta from each angle, the lower portion concealed by the similar setae which densely clothe and surpass the akene.

This very peculiar species is in its alternate leaves, and general vegetative characters, and its sharply angled or perhaps winged akenes, most unlike the genus to which I have referred it, but I am disinclined to multiply genera in this perplexing sub-tribe, unless the receipt of additional specimens with mature akenes may render it necessary in this instance.

974. Verbesina Bridgesii sp. n.

Stems erect, light green, coarsely angled, pubescent with short, someweat retrorse hairs; leaves 7–14 cm. long, 2–5 cm. broad, ovate or the upper lanceolate, the apex tapering to an acute point, the base abruptly contracted into a narrow portion, which is clasping and auriculate, the auricles glandular-viscid, coarsely and irregularly toothed, thickish, rugose-reticulated, grayish-green or slightly yellowish, above scabrous, below soft-tomentose; inflorescence tomentose, the heads compactly arranged, 7 mm. long, nearly 1 cm. broad, the involucre hemispherical, the scales in 3 or 4 series, spatulate-oblong, with rounded green tips; rays about 10, white, 5 mm. long, oval or nearly rotund, with 3 slight rounded teeth, 3–5-nerved; scales of the disk obovate, acuminate, the apex ciliate or lacerate, hyaline, finely many-nerved, as long as the disk flowers; disk-corollas 6 mm. long, regularly narrowly funnelform, the lobes small, triangular ovate, obtusish; anthers slightly exsert, black, 2 mm. long. Mature akene not seen. All these characters to be slightly modified as the flowers described are rather immature.

Collected also by Bridges in Bolivia.

29. *Tagetes graveolens* L'Herit.(?)=Mandon's 65 and Seeman's 704 from Lima, Peru.

965. Plagiocheilus erectus sp. n.

Glabrous, annual, the stems erect, slender, 4–30 cm. high, somewhat branched, channelled; petioles 1–2 cm. long, channelled; leaves bi-tri-ternately compound, the two lower segments distant from the terminal by about half their length, the ultimate segments lance-oblong, acute, pellucid-punctate and aro-

matic; heads peduncled, 7 mm. broad, by 4 mm. long, the blackish scales oblong, obtuse, thick, about equalling the yellowish flowers; akene 3 mm. long, 2 mm. broad including the wing, which is yellowish and fimbriate; the akene proper 1 mm. broad, dark brown, bluntly keeled, oblanceolate, bearing a short lighter brown crown. Material too scanty for flower-dissections.

961. Listed as "Senecio," is ASTER BANGII = *Tripolium conspicuum* Lindl. DC. Prod. 6: 254, but there is an *Aster conspicuus* Lindl. l. c. 250. In my opinion *Aster Bangii* is distinct from ASTER ASTEROIDES (Colla) (*Baccharis asteroides* Colla, Mem. Act. Torin. 38: 14. *pl. 25. f. 1*).

78. Listed as "*Mutisia viciaefolia* Cav.?" is *M. Candolleana* Gard. & Field, Sert. Pl. *pl. 45, 46* = Mandon's 7, Pearce's 662, Rusby's 155, and also collected by Bridges. The cut published in *Druggists' Bulletin*, 1888, is of this species.

881. Published as "*Mutisia hastata* Cav." is MUTISIA CAMPTOSORIFOLIA sp. n.

Climbing by terminal leaf-tendrils, glabrous throughout, except the axillary buds; branches purple, above very narrowly angled by the adnate petioles, where they are densely leafy; leaves 6–8 cm. long exclusive of the tendril, 5–8 mm. broad, regularly tapering from the base to the apex, where they are abruptly contracted into a slender simple short and weak tendril, the base sagittate, clasping, the lobes scarcely 5 mm. long, very acute, thick and coriaceous, dark green, shining, the midrib very strong and prominent both sides, especially below, the veins fine and much reticulated; axillary buds finely and densely white-floccose; heads sessile among the floral leaves, the involucre infundibular-campanulate, about 3.5 cm. long, a little more than 1 cm. broad at the sub-truncate base, less than 2 cm. broad at the apex, the flowers exceeding it by 1.5–2 cm.; scales in about 5 or 6 series, bright purple, strongly 13–15-ribbed, the outer very broadly ovate, abruptly and pungently acuminate, the inner oblong, mucronate and pilose at the tip; rays (about 10?) scarlet or crimson, strongly 3-toothed; disk corollas scarlet, regularly funnelform, about 17 mm. long, the teeth long, lanceolate, acute; akene 1 cm. long, linear, glabrous, purplish, strongly 4-ribbed with 4 partial intermediate ribs; pappus densely long-plumose.

66 and 791. LOPHOPAPPUS FOLIOSUS Rusby, Bull. Torr. Bot. Club, 21: 487.

736 and 736 a, published as "*Perezia multiflora* (H. and B.) Less." is

PEREZIA GLOMERATA sp. n.

Stems erect or assurgent, stout, 2–4 dm. long, pale green, coarsely angled, puberulent, closely invested by the numerous erect leaves, which are 4–7 cm. long and 1.5–2 cm. broad, lance-linear, broadest at the clasping base, acute, deeply incised-toothed, many of the teeth bearing one or two small similar teeth at the base, the teeth spinulose and very pungent, thick and somewhat fleshy, faintly scabrous both sides, more so above, the midrib coarse, impressed above, beneath bearing three coarse nerves; inflorescence densely clustered at the apex, the cluster about 5 or 6 cm. broad, leafy; heads a little more than 1 cm. long, 1.5 cm. broad, the scales triangular-ovate, acuminate and pungent, ciliate and sparsely toothed, the teeth ciliate, the inner with broad, hyaline, blue margins; corolla light blue, the tube funnelform, 5 mm. long, the larger lip oval-elliptical, very minutely 3-toothed, 4 mm. long, 2 mm. broad, deeper blue at the base, the smaller lip lanceolate, two-thirds as long, scarcely toothed; anther tips little exserted, the anther 3.5–4 mm. long including the caudae which are 1 mm. long, the body and the black shining appendage about equal in length; pappus golden brown, serrate, a little exceeding the tube of the corolla; mature akene not seen, when young densely clothed with long golden brown hairs.

= Mandon's 26, Spruce's 5551, Lechler's 1726 and 1847, Matthew's 633, Pentland's from Titicaca.

Enumeration of Nos. 1-1000, continued.

CAMPANULACEAE.

Centropogon Surinamensis (L.) Presl, Prod. Mon. Lobel. 48. Yungas, 1890 (500, 642 and 738a).

Siphocampylus tupaeformis Zahlbr. Ann. k. k. Hof. Mus. 6: 440. Vic. La Paz, 10,000 ft., 1889 (77) = Rusby's 636.

Siphocampylus giganteus (Cav.) Don, var. *latifolius* Britton, Bull. Torr. Bot. Club, 19: 373. Yungas, 1890 (738) = Rusby's 638.

Siphocampylus volubilis (H.B.K.) Don, Gen. Syst. Gard. 3: 703. Yungas, 1890 (256); collected also by Pearce at Buturo, July, 1865. = Rusby's 643 and 650.

Siphocampylus gracilis Britton, Bull. Torr. Bot. Club, 19: 374. Yungas, 1890 (256a and 644) = Rusby's 640, and one collected by Bridges.

Var. *glabra* Britton, Bull. Torr. Bot. Club, 19: 374. Yungas, 1890 (257) = Rusby's 639.

VACCINIACEAE.

Chupalon pubescens (H.B.K.) Kuntze, Rev. Gen. Pl. 383 (*Thibaudia pubescens* H.B.K. Nov. Gen. 3: 273). Yungas, 1890 (290) = Rusby's 2033.

Vacciniopsis ovata Rusby, Bull. Torr. Bot. Club, 20: 433. Songo, Nov. 1891 (876).

Vaccinium floribundum H.B.K. Nov. Gen. 3: 266. *pl. 251.* Yungas, 1890 (728) = Rusby's 2028.

Vaccinium empetrifolium H.B.K. Nov. Gen. 3: 263. *pl. 248.* Yungas, 1890 (708) = Rusby's 2022.

Rusbya taxifolia Britton, Bull. Torr. Bot. Club, 20: 68. Yungas, 1890 (624) = Rusby's 2692.

RUSBYA BOLIVIANA Britton, sp. n.

Branches elongated, slender, glabrous or minutely scabrate above; stipules weak, subulate, 2 mm. long; petioles 1 mm. long, stout, the blade 3–4 cm. long, 10–15 mm. broad, oblong, the base acute, the apex abruptly acuminate but not acute, thick and rigid, entire, slightly revolute, glabrous and shining, especially above, the primary veins only 2 or 3, extended near the margin two-thirds of the way to the apex, other veins indistinct; umbels axillary, sessile, 3–6-flowered; flowers not seen; fruiting pedicels spreading or pendulous, 1 cm. long, slender, dilated upward and slightly compressed where they are continued into the calyx, pubescent; fruit (apparently immature) 3 mm. long and broad, urceolate with broad truncate apex where the short base of the calyx crowns it, glabrous, dry, strictly 5-celled; the numerous seeds (immature) light brown, lance-oblong, curved.

Songo, Nov. 1890 (852).

In its apparently non-fleshy fruit this differs from the other species of the genus; but, though resembling *Ceratostemma*, its nearest approach is evidently toward *Rusbya*.

CAVENDISHIA PANICULATA sp. n.

Of luxuriant habit, glabrous except the lower leaf-surfaces; branches very coarsely and bluntly angled; leaves reflexed, the petioles about 1 cm. long, 4 mm. broad, blade 1–2 dm. long, 5–10 cm. broad, ovate, about equilateral, the base slightly cordate, apex short-acuminate, entire, very thick and rigid, pale, glabrous above, very finely pubescent beneath, especially the veins, strongly

7-ribbed from near the base, the outer pair of ribs near the margin, ribs and coarsely reticulate veins very strong beneath, impressed above; racemes loosely 5–10 cm. long, peduncled, panicled, the panicle stalked; pedicels 1–1.5 cm. long, stoutish; calyx broadly campanulate, about 5 mm. long, 6 mm. broad, the base intruded and 5-lobed, the teeth semi-circular, some with a minute point; mature flower not seen; fruit (mature?) globose-ovoid, a little broader than long, the lobes obsolete, dry, purple-brown, granulate.

Yungas, 1890 (721) = Rusby's 2403.

ERICACEAE.

Pernettya Pentlandii DC. Prodr. 7: 587. Yungas, 1890 (729) Capi, March, 1890 (766) = Rusby's 2017 and 2018.

Gaultheria tomentosa H.B.K. Nov. Gen. 3: 287. *pl. 262.* Yungas, 1890 (223) = Rusby's 2032.

Gaultheria anastomosans (L. f.) H.B.K. Nov. Gen. 3: 285. Yungas, 1890 (487) = Rusby's 2025 and 2095.

Gaultheria rufescens DC. Prodr. 7: 595. Yungas, 1890 (667). = Rusby's 2011 and 2013.

Gaultheria glabra DC. Prodr. 7: 596. Yungas, 1890 (671). = Rusby's 2015.

Gaultheria conferta Benth. Pl. Hartw. 219. Yungas, 1890 (707) = Rusby's 2020.

Clethra Brasiliensis Cham. Linnaea. 8: 510. Yungas, 1890 (393 and 474) = Rusby's 2091.

Clethra brevifolia Benth. Pl. Hartw. 143. Yungas, 1890 (717).

PLUMBAGINEAE.

Plumbago scandens L. Sp. Pl. Ed. 2, 215. Songo, Nov. 1891 (889) = Rusby's 1073 and 1917.

MYRSINEAE.

Myrsine flocculosa Mart. Herb. Fl. Bras. 257. Yungas, 1890 (389) = Balansa's Paraguay, 2377.

Myrsine sp. obviously undescribed, but material unfit for description. Yungas, 1890 (444).

Geissanthus Boliviana Britton, Bull. Torr. Bot. Club, 20: 140. Songo, Nov. 1891. (827 and 847) = Rusby's 562; also

collected by Pearce at Coroico and Sandillani. Distributed as "Ardisia."

Geissanthus Bangii sp. n.

Branches stout, crooked, light brown, very rugose, glabrous or very sparsely lepidote above, leafy; leaves 10–20 cm. long, 3–6 cm. broad, oblong to oval, the cuneate base tapering into a margined petiole 1 cm. long, the apex short-acuminate, obtusish, pale, membranaceous, entirely glabrous, the midrib elevated both sides, prominent below, the principal veins about 15 pairs, prominently reticulate; panicles sub-sessile, 10–20 cm. long, 7–10 cm. broad, lax, pyramidal, the rhachis angled, minutely lepidote; pedicels 3–4 mm. long, slender, dilated upward, continuous with the calyx; fully expanded flower 4 or 5 mm. broad; calyx black-dotted, the tube hemispherical, the lobes broadly ovate, obtuse, erect, as long as the tube; corolla black-dotted, the strongly reflexed lobes oval, 1 ½ times the length of the tube, faintly 3-nerved; staminate flowers, filaments 3 mm. long, slightly flattened, anther 1.25 mm. long, oblong; style about equalling the filaments; pistillate flowers and fruit not seen.

Songo, Nov. 1890 (834)=Spruce's 5185, and also collected by Pearce in Yungas. Distributed as "Ardisia."

Parathesis macrophylla (Benth.) Britton. (*Ardisia ferruginea* H.B.K. var. *macrophylla* Benth. Pl. Hartw. 217). Songo, Nov. 1891 (861).

STYRACEAE.

Styrax ovata (R. & P.) A.DC. Prodr. **8**: 267. Yungas, 1890 (467) = Rusby's 838.

OLEACEAE.

Menodora helianthemoides H. & B. Pl. Equin. **2**: 98. *pl. 110.* Songo, Nov. 1891 (942).

APOCYNACEAE.

Prestonia Muelleri sp. n.

Finely but densely short yellowish-strigose throughout; stems stoutish, the internode about twice the length of the leaves next above; petioles less than 1 cm. long, very stout; leaves 9–12 cm. long, 6–8 cm. broad (larger?) ovate, the base rounded, the apex short-acuminate and acute, primary veins about 4 pairs, the others indistinct; racemes short-peduncled, simple, the pedicels 1.5–2 cm. long; calyx ample, 1.5 cm. long, 1 cm. broad, the tube very short,

the lobes 12 mm. long, 5 mm. broad, lance-oval, short-acuminate, acute, pilose within and without, bearing 5 squamae opposite its lobes, these broadly oval, with rounded apex, as long as the disk; corolla short, hypocrateriform, 11–12 mm. long exclusive of the lobes, which are strongly reflexed, 1 cm. long and nearly as broad, ovate with rounded apex, pubescent without, glabrous within; tube within glabrous below the stamens, bearing a densely pilose, slightly intruded fold opposite each stamen and slightly longer than the latter, alternating with these 5 pubescent lines, which broaden upward and pass into a membranaceous pilose ring, 1 mm. broad, which crowns the throat; filaments very short, bearing above, between the anther-caudae, 2 narrow wings which nearly converge at the top and terminate in white reflexed tips; anthers long-acuminate, very acute, narrowly winged along the middle of the inner face, pilose without, the caudæ long and acutely acuminate, divergent, the middle portions adherent to the stigma; disk of 5 thick and fleshy oblong lobes with rounded apex, bluntly keeled, about equalling the ovaries; style including stigma, 9 mm. long, the ring thick and fleshy, the stigma ovoid, lightly but distinctly 2-lobed at the summit; fruit 18–20 cm. long, thickness nearly uniform, 6–7 mm., falcate or nearly straight, obtuse, ferruginous; seed blackish, 1 cm. long, flat, twisted and wrinkled, acuminate but not acute, the coma fine, 2–3 cm. long.

Yungas, 1890 (403).

For the generic determination of this plant I am indebted to Dr. Johann Mueller of Geneva.

Forsteronia Sellowii Muell. Arg. in Mart. Fl. Bras. 6: 1. 101.

Songo, Nov. 1891. (850) = Sellow's 7352.

FORSTERONIA MOLLIS sp. n.

Soft-downy; branchlets slender, upwardly curved, red-brown with light brown dots, minutely downy, leafy, the lower leaves small; petioles 5–8 mm. long, margined; leaves, except the lowest, 7–10 cm. long, 4–6 cm. broad, ovate, abruptly short-pointed and acute, the base rounded, but at the petiole slightly acuminate, minutely downy above, densely so beneath, finely reticulately veined, the veins obscure; panicle amply peduncled, 3 cm. long and broad, not fully developed in my specimens; mature bud oblong, the apex rounded, 5 mm. long, the calyx comprising one-third of its length; pedicel and calyx densely pubescent, the latter hemispherical, its lobes sub-rotund; disk sub-globose, strongly 5-lobed; corolla downy within, the oblong lobes 3 times the length of the tube, 3 mm. long, 1 mm. broad, the apex rounded; filaments inserted near the base of the tube, very slender, 1.5 mm. long, the anther 1.25

mm. long, oblong-oblanceolate, strongly sagittate, the apex slightly incurved, the caudae slightly recurved; entire pistil about the length of an anther.

Yungas, 1890 (274). Apparently the same as Glaziou's 14064.

Near *F. Brasiliensis* A.DC.

FORSTERONIA OBSCURA sp. n.

Branchlets numerous, slender, strongly recurved, 1.5–2 dm. long including the panicle, leafy, dark brown, minutely puberulent; petioles stout, margined, 5–7 mm. long; leaves 6–10 cm. long, 2–3 cm. broad, lanceolate, the base blunt to rounded, the apex tapering and acute, membranaceous, rigid, very dark green, glabrous, minutely puberulent on the midrib below, the principal primary veins 8–10 pairs, these connected by sub-parallel secondary ones; panicles shortly and stoutly peduncled, narrowly pyramidal, curved, 6–10 cm. long, about 2 cm. broad, brown; flowers on short stout slightly angled pedicels, each subtended by one or two subulate downy bracts; calyx-teeth open and reflexed in the bud, lance-linear, tapering from the base, acute, 3 mm. long; disk 5-lobed, the lobes slightly exceeding the ovaries, rounded at the apex; corolla 4 mm. long, the tube very short, barbellate within, the lobes oblong-lanceolate, acute; stamens 3 mm. long, the anthers one-half longer than the filament; ovaries short, broad.

Songo, Nov. 1890 (855).

ECHITES BOLIVIANA Britton, Ms.

Branches slender, reddish, glabrate; the younger portions, petioles, pedicels and calyx very finely strigose; petioles 5–7 mm. long, stout; leaves 6–10 or 12 cm. long, 3–4 cm. broad, oblong-ovate, the base rounded and subcordate, the apex abruptly short-acuminate, acute, entire, upper surface as above described, lower surface soft gray-downy, principal veins 6 or 7 pairs, connected by the secondary ones; peduncles more than half the length of the leaves; flowers very shortly and stoutly pedicelled, the calyx 3 mm. broad, its lobes triangular, acute, 1.5 mm. long and broad, the base pilose within and lined by a ring of small ligulate glands of irregular size; disk cup-shaped, closely enclosing the ovaries, half as long as the calyx, a little shorter than the ovaries, the margin shallowly and sinuately lobed; tube and throat of corolla 3 cm. long, cylindrical, somewhat dilated in the upper third, the lobes 1.5 cm. long; throat of corolla densely bearded at and below the insertion of the stamens; filaments very short, strongly curved; anthers oblong, 4 mm. long, reaching within 3 mm. of the base of the corolla-lobes; fruit 18–20 cm. long, the joints about 8 mm. long, 5 mm. broad, dark brown, black-dotted.

Yungas, 1890 (551) = Rusby's 2381, but apparently not the same as Rusby's 2380 and 2382.

Amblyanthera brachyloba Muell. Arg. Linnaea, 30: 423 (1859–60).

Yungas, 1890 (461) = Rusby's 2585.

Laseguea Mandoni Britton, Ms.

Branches slender, red-brown, scabrous; petioles 2–4 or 5 cm. long, the older scabrous like the branches, the younger white-villous; blades 8–12 cm. long, 5–9 cm. broad, broadly oval to rotund-ovate, the base cordate with narrow sinus, the apex very shortly and very abruptly pointed, acute, entire, above dark green, slightly scabrous, below white, densely short-tomentose, principal veins about 7 pairs, ascending, parallel, slightly curved, the lowest pair with several large branches radiating downward; racemes long-peduncled, elongating as the lower flowers fall, dense, the pedicels stout, 1 cm. long, like the rhachis and young peduncles, white-villous; calyx varying from a little less to a little more than 2 cm. long, with scarcely any tube, the linear divisions 2 mm broad, finely tapering, light brown, pubescent within and without, open in the bud; corolla in some racemes a little longer, in others a little shorter than the calyx, deep maroon except the tube, which is colored like the calyx, funnelform, contracted just below the stamens, and slightly just below the lobes, which are 3 mm. long, oblong-oval, obtuse, within bearded just below the lobes; filaments very short, bearded, the anthers 5 or 6 mm. long, not reaching to the base of the corolla-lobes; stigma ovate, narrowly 5-winged, terminating in a 2-cleft subulate appendage; calyx lined by a ring of ligulate glands a little shorter than the disk, the latter of 5 nearly quadrilateral lobes, a little shorter than the ovaries.

Yungas, 1890 (402).

Dipladenia sp. probably undescribed. Yungas, 1890 (249).

ASCLEPIADEAE.

Sarcostemma incanum A.DC. Prodr. 8: 542. Songo, Nov. 1891 (985). Distributed as "Amblystigma."

Gothofreda eriantha (Decne.) Kuntze, Rev. Gen. Pl. 420 (*Oxypetalum erianthum* Decne. in DC. Prodr. 8: 584. Yungas, 1890 (615) = Morong's 655.

Gothofreda andina sp. n.

Stems erect, 2–4 dm. long, flexuous, simple or sparingly branched below, densely hirsute with divergent hairs; lower leaves reduced, the others 3–4 cm. long, with petioles 5 mm. long, 1.5 cm. broad, oblong-ovate, cordate with a broad sinus, acute, scabrous-

hirsute above, hirsute below, the principal veins 3 or 4 pairs; umbels long-peduncled, axillary, solitary, 1.5 cm. in diameter, floral leaves few, narrowly oblong, the pedicels shorter than the flowers, like the peduncles and calyx white-hirsute; calyx-lobes tapering from the base, 3.5 mm. long, glabrous within, the tube very short; disk consisting of numerous papillae; corolla pilose without, glabrous within, the tube hemispherical, angled, the lobes 4 mm. long, triangular-lanceolate; crown divided into 5 oblong-ovate lobes 3 mm. long, 1.5 mm. broad, the upper fourth 2-parted, not appendaged within; hyaline terminal appendages nearly as long as the anther, nearly twice as long as the linear callosities of the pollinia, obovate with rounded apex; stigma-appendages very narrow, extending 3 mm. beyond the stamens; follicles 7 cm. long, 1 cm. broad, lanceolate, the apex long-tapering but obtuse, tomentose, not apparently muricate; body of seed light brown, 3.5 mm long, 2 mm. broad, strongly flattened, the base ovate, rounded, erose, strongly muricate, one face concave, the other convex, its central row of tubercles forming a slender slight keel.

Yungas, 1890 (394a and 425). This species is very near *G. capitata* (Mart. et Zucc.) Kuntze, but so far as I can see all the specimens from Guiana and Bolivia in the Kew herbarium placed under the latter name are *G. andina.*

Asclepias Cochabambensis sp. n.

Pale, glabrous except a slight pubescence upon the top of the stem, peduncles and pedicels; stem stoutish, ascending or erect, 3–4 dm. long (or longer?), pale green with few erect branches or simple, densely leafy; leaves oblong-lanceolate or oblong-oval, the lower very small, the upper 5–6 cm. long, 2–3 cm. broad, on very short broad petioles, the base rounded, or rarely sub-cordate, the apex acute and mucronate, thick, the midrib broad and coarse, the principal veins 8–11 pairs, near the margin bifurcated and interarching; peduncles shorter than the leaves, spreading, umbels 4–6 cm. broad, pedicels about half the length of the peduncle; flowers in the reflexed condition nearly 1.5 cm. long; calyx-lobes strongly reflexed, 3 mm. long, nearly 1.5 mm. broad, ovate, acute; corolla-lobes oblong, obtuse, 7 mm. long, 3 mm. broad, greenish; hoods orange, elliptical-oblong, nearly twice the length of the column, the horns very strongly incurved; wings of the anthers large, thickened, bearing a small blunt auricle at the base, the acuminate apex adnate to the very thin hyaline terminal appendage, whose sub-rotund apex is inflexed; fruit not seen.

Vic. Cochabamba, 1891 (982).

The same collected by Bridges, but the locality not given.

Asclepias Weddellii Fourn. Ann. Sci. Nat. (VI.) **14**: 381. Yungas, 1890 (612).

Metastelma parviflorum (Sw.) R. Br. Mem. Wern. Soc. **1**: 52 (1811). (*Cynanchum* Sw. Fl. Ind. Oc. **1**: 537.) Vic. Cochabamba, 1891 (989) = Pearce's specimen from Pelechuco.

Ditassa lanceolata Decne. in DC. Prodr. **8**: 576. Yungas, 1890 (479).

Morrenia brachystephana Griseb. in Goett. Abhandl. **19**: 205 (1874). Vic. Cochabamba, 1891 (986).

Gonolobus elliptica sp. n.

Roughish-hirsute throughout with spreading hairs; stems slender, rough-fissured, the cork orange without, light brown within; branchlets purple, the internodes some longer, some shorter than leaf with petiole; petioles and blades of each pair slightly unequal, the former 1–1.5 cm. long, the latter 3–6 cm. long, 2–3 cm. broad, oblong to oblong-ovate, only slightly cordate with broad sinus, the apex varying from acutish to rounded or retuse, dark green, strigose both sides, principal veins about 5 pairs; umbels closely sessile, of 5–10 very dark purple flowers; calyx rotate, the lobes purplish green, hirsute, oblong, 3.5 mm. long, nearly 2 mm. broad, obtuse, faintly 5–7-nerved, the disk inconspicuous; corolla rotate, the lobes 4 mm. long, 3 mm. broad, oval, the apex rounded or minutely notched, many-nerved, pilose without, thickish; crown colored like corolla, saucer-shaped with incurved margin, 5-lobed; essential organs forming a disk-shaped mass not projecting above the crown, brown, with stellate purple center; fruit not seen.

Vic. Cochabamba, 1891 (992).

Not closely related to any other species. Distributed as "Ibatia."

LOGANIACEAE.

Buddleia andina Britton, Ms.

A much branched small tree, densely short-tomentose, the ultimate branchlets erect and striate; leaves sessile, on new shoots 4–8 cm. long, 1.5–2.5 cm. broad, on older wood 2–3 cm. long by 5–10 mm. broad, lance-oblong, both ends obtuse, entire, thick but flaccid, above dark green and rugose with deeply impressed veins, below white or yellow with prominent veins, the primary 6–8 pairs; heads on short stout erect peduncles, or mostly sessile in a pair of leafy bracts, globose, dense, in flower 8–12 mm., in fruit 12–20 mm. in diameter; bracts linear, oblanceolate, about the length of the calyx, and, like it, densely hirsute; calyx 5 mm. long, nearly 4 mm. broad, campanulate, 4-angled, lobed one-third

of the way to the base, the 4 lobes very thick, ovate, blunt; corolla a little exceeding the calyx, funnelform, the lobes one-third the length of the tube, semicircular with hyaline margins; anthers inserted about the middle of the corolla, very small, obtusely sagittate, the cells mucronate at the apex; pistil 4 mm. long, the ovary turbinate, truncate, pubescent, the style stout, about as long as the ovary, darker, a little broader and compressed above; fruit 4 mm. long, 2.5 mm. broad, oval with rounded apex, the base obtusely 4-angled, 2-sulcate, pubescent; seeds brown, very numerous, 1 mm. long, lance-oblong, flattened and angled.

Vic. La Paz, 10,000 ft., 1889 (85) = Rusby's 2050.

Reputed to be very poisonous.

GENTIANEAE.

Lisianthus calygonus R. & P. Fl. Per. **2**: 14. *pl. 126.* Yungas, 1890 (339)=Rusby's 1227.

Lisianthus ovalis R. & P. Fl. Per. **2**: 13. Yungas, 1890 (520).

Gentiana punicea Wedd. Chlor. And. **2**: 70. Yungas, 1890 (655 and 719).

Gentiana sedifolia H.B.K. **3**: 173. *pl. 225.* Vic. Cochabamba, 1891 (939)=Rusby's 674.

Halenia gracilis (H.B.K.) Griseb. Gent. 327. Yungas, 1890 (665) =Rusby's 669 and 670.

POLEMONIACEAE.

Cantua buxifolia Juss.; Lam. Encycl. **1**: 603. Vic. La Paz. 1889 (103).

HYDROPHYLLACEAE.

Phacelia Peruviana (R. & P.) Spreng. Syst. **1**: 584. Vic. La Paz. 10,000 ft. 1890 (169) = Rusby's 1157.

Phacela pinnatifida Griseb.; Wedd. Chlor. And. **2**: 85. Vic. Cochabamba, 1891 (940).

Marilaunidium dichotomum (R. & P.) Kuntze, Rev. Gen. Pl. 434. (*Nama dichotoma* Chois. in DC. Prod. **10**: 182.) Vic. Cochabamba, 1891 (958) = Mandon's 453, and very likely distinct from *M. dichotomum.*

BORAGINEAE.

Cordia discolor C. & S. Linnæa **4**: 482 (1829). Yungas, 1890 (399) = Rusby's 2051.

Heliotropium (Euheliotropium) Bridgesii sp. n.

Strigose throughout; primary root woody, nearly 1 cm. in diameter, crown stout, knotty, much branched, stems 1–3 or 4 dm. long, prostrate, very slender, the internodes mostly nearly twice as long as the leaf with petiole; petiole nearly half the length of the blade, the latter 7–10 mm. long, 3–5 mm. broad, oval-obovate with acute base and rounded minutely pointed apex; inflorescence terminal, dichotomous; calyx-lobes very unequal, narrowly oblong, foliaceous, blunt, about equalling the corolla-tube, which is nearly as broad as long and densely bearded at the base; corolla-lobes undulately plicate, very broad; anthers very small, linear-oblong, obtuse, less than half the length of corolla-tube; style a little longer than the ovary, nearly as broad, ovoid-conical, blunt, annulus small; nutlets 4, distinct, slightly shorter than the smaller (inner) calyx-lobes.

Vic. Cochabamba, 1891 (950).

Also collected by Bridges:

Heliotropium (Euheliotropium) abbreviatum sp. n.

Coarsely hirsute throughout, stems ascending from a vertical root, stout, coarsely and strongly angled, much branched, the branchlets naked below, above abbreviated, with the leaves crowded to form a sort of involucre for the sessile cymes; lower leaves subpetioled by the narrowed base, 3–6 cm. long, 1–2.5 cm. broad, lanceolate to rhomboid-ovate, mostly inequilateral, obtuse, margin entire but irregular, both sides strigose, the hairs upon the veins underneath very coarse; principal veins 3 or 4 pairs, coarse and broad, strongly ascending; cymes short and much contracted, the flowers nearly concealed in the white hispid indumentum of the peduncle, calyx, etc.; calyx parted nearly to the base, the lobes oblong, obtuse, foliaceous, erect, 1.5 mm. long; corolla slightly exceeding the calyx, the tube inflated, the limb plicate, lobes imbricate; anthers inserted about the middle of the tube, broadly oval, barely acute; ovary very small, twice as broad as the annulus, longer than the style and appendage, the latter much depressed, scarcely distinguishable from the annulus; fruit not seen.

Vic. Cochabamba, 1891 (924).

Heliotropium (Orthostachys) andinum sp. n.

Root strong and woody; stems several, prostrate or ascending, hirsute, leafy, the leaves mostly more than twice the length of the internodes; petioles 2–3 mm. long, blade about 2 cm. long, 5–6 mm. broad, oblong, base subacute, apex acute and apiculate, strigose both sides, especially beneath; cymes terminal, dichotomous, the one-sided racemes about three in number, when through flow-

ering 5–6 cm. long; flowers sessile, 4–5 mm. long; calyx-lobes strigose, one-half the length of the flower, lanceolate, tapering from the base, acute, short-aristate; corolla strigose, the tube ovoid-cylindrical with contracted mouth, the lobes nearly one-fourth the total length, linear-acuminate, acute, anthers inserted a little below the middle of the tube and reaching not quite to the lobes, lanceolate, acuminate-appendaged, 4-celled; style very stout, the 5-lobed annulus slightly below the middle, the terminal portion conical, obtuse, the ovary scarcely twice as large as the annulus; fruit densely strigose, shorter than the calyx-teeth, broader than long, the nutlets apparently separating in pairs, attached near the base to the short broad gynobase, having a short blunt inturned apex.

Vic. Cochabamba, 1891 (929).

HELIOTROPIUM (?) BOLIVIANUM sp. n.

Root rather stout; stems several, sub-erect, stoutish, 1–2 dm. long, light brown, densely hirsute with spreading hairs; internodes one-half to two-thirds the length of the leaves; leaves sessile, 4–5 cm. long, 1–1.5 cm. wide, lanceolate, the inequilateral base narrowed, apex obtuse or acutish, above dark green, scabrous with impressed veins, beneath yellowish with prominent veins, the primary about 5 pairs; cymes terminal, dichotomous; flowers about 7 mm. long, the calyx less than half the length of the corolla; calyx-lobes lanceolate, obtusish; corolla pilose, the tube cylindraceous, 5-angled, the limb broad, rotate-campanulate, plicate, the lobes scarcely any, very slightly imbricated; stamens 5, all perfect and similar, sessile very near the base of the tube, the body oval-elliptical, the angular, blackish acumination as long as the body; ovary small, glabrous, not perceptibly lobed, style stout, the apex depressed-conical, 2-cleft, about as large as the ovary, the annulus about twice the size of the ovary, obscurely sinuate-lobed; fruit apparently only 1-carpelled by abortion and 1-seeded; seed exalbuminous, cotyledons large, plane.

Vic. Cochabamba, 1891 (926). A positive determination of the genus is prevented by the peculiarly reduced fruit, but the style is that of *Heliotropium*. It has the corolla of Euploca, but not its stamens nor style.

Borago officinalis L. Sp. Pl. 137. Vic. La Paz, 10,000 ft., 1889 (38 and 129).

CONVOLVULACEAE.

Ipomoea coccinea L. Sp. Pl. Ed. 2, 228. Yungas, 1890 (490 and 587).

Ipomoea hederacea Jacq. Coll. 1: 124. Yungas, 1890 (534).

Ipomoea Bona-nox L. Sp. Pl. Ed. 2, 228. Yungas, 1890 (589) = Rusby's 1990.

Ipomoea—apparently undescribed, but specimens insufficient for description. La Granga, 1891 (750). Apparently the same as Jameson's 5531 from Ecuador.

Convolvulus laciniatus Desv. in Lam. Encyc. 3: 546. Vic. Cochabamba, 1891 (959) = Rusby's 1851.

Convolvulus Ottonis (Chois.) Meissn. in Mart. Fl. Bras. 7: 311. Vic. Cochabamba, 1891 (990).

Evolvulus incanus Pers. Syn. 1: 228. Vic. Cochabama, 1891 (970).

Evolvulus sericeus Sw. Prod. 55. Vic. Cochabamba, 1891 (951)= Mandon's 1491 and Glaziou's 13,475.

Dichondra argentea Willd. Hort. Ber. 297. Vic. La Paz, 10,000 ft. 1890 (98 and 185) = Rusby's 2008.

Cuscuta Popayanensis H.B.K. Nov. Gen. 3: 123 (?) Vic. La Paz, 10,000 ft., 1889 (115) = Mandon's 1479 and (?) 1480 in Herb. Kew as *C. grandiflora* H.B.K.

SOLANACEAE.

Solanum radicans L. f. Dec. 1: *pl. 10.* Vic. La Paz, 10,000 ft., 1889 (1 and 10) = Rusby's 807.

Solanum nudum H. & B.; Dun. Solan. Syn. Ed. 2, 20. *pl. 107.* Vic. La Paz, 10,000 ft., 1889 (31) = Rusby's 769 and 785.

Solanum lycioides L. Mant. 1: 46. Vic. La Paz, 10,000 ft. 1889 (32) = Rusby's 833 and 835.

Solanum pulverulenum Pers. Syn. 1: 223. Vic. La Paz, 10,000 ft. 1889 (90) = Rusby's 797.

Solanum Mandonis Van Huerck and Muell., Huerck, Obs. Bot. 78. Yungas, 1890 (238) = Rusby's 782.

Solanum callicarpaefolium Kunth et Bouché, Sec. Nov. et Emend. Hort. Bot. Berol. 10. Yungas, 1890 (259) = Rusby's 788, Schomburghk's 150 and Mandon's 423.

Solanum tripartitum Dunal ex. DC. Prod. 13: 1, 72. Yungas, 1890 (538) = Rusby's 808.

Solanum nigrum L. Sp. Pl. 186. Yungas, 1890 (539 and 727) = Rusby's 802.

Solanum sisymbriifolium Lam. Tabl. Encyc. 2: 25. Yungas, 1890 (614) = Rusby's 768.

Solanum incarceratum R. & P. Fl. Per. 2: 40. *pl. 176. f. a.* Yungas, 1890 (614a and 702) = Rusby's 783 and 793.

*Solanum Spruce*i V. Huerck et Muell. Arg.; Huerck, Obs. Bot. 67. Yungas, 1890 (630). A little less tomentose than Spruce's 4352, the type.

Solanum Salzmanni Dun. in DC. Prod. 13: 1, 206. Yungas, 1890 (630a) = Jenman's 4072. Very variable as to spine-characters.

Solanum montanum (Dun.) R. & P. Fl. Per. 2: 32. *pl. 160. f. 6.* (*Witheringia montana* var. β, Dun. Syn. 2, n. 8.) Yungas, 1890 (740) = Rusby's 795.

SOLANUM URSINUM sp. n.

A stout coarse shrub, aculeate with few scattered solitary prickles, which are short, straight or slightly recurved, laterally compressed with broad base, very sharp and smooth; densely shaggy, with ferruginous stiff divaricate hairs, half as long as the prickles and stellate at their summits; petioles 2–3 cm. long, nearly as long as their supporting branchlets, blades one to several dm. in length, 5–15 cm. broad, obovate, the base inequilateral, rounded or subcordate, apex not seen, very coarsely sinuately lobed or angled, very thick, both sides densely shaggy like the branchlets; cymes mostly peduncled, the peduncles shorter than those of its branches, the pedicels very stout, shorter than the calyx; which is shaggy within and without, its lobes a little longer than the tube, ovate, acute, nearly 1 cm. long, 4–5 mm. broad; corolla purplish blue, shaggy without, divided nearly to the base, oblong, obtuse, 2 cm. or more in length; anthers 9 mm. long, oblong, slightly acuminate but obtuse, the apex apparently slightly recurved and pores looking outward; ovary and lower half of style densely shaggy, style thickened upward, truncate, 12 mm. long exclusive of ovary; fruit globular, 1.5 cm. in diameter (when dry), glabrous, shining, apparently green.

Yungas, 1890 (703). Near *S. pelliceum* Sendtn. but flowers larger, calyx smaller and hairs distinct.

SOLANUM PEARCEI Britton, Ms.

Shrubby; branches slender, light brown, above narrowly winged by the decurrent petioles, and, like the peduncles and pedicels, sparsely clothed with bristly hairs; leaf narrowed gradually into a margined petiole about 1 cm. long, the blade 8–12 cm. long, 3–4 cm. broad, oblong, acute at both ends, the margins sharply revolute, thickish, rigid, above glabrous, beneath sparsely bristly-hairy, midrib and veins very stout and prominent

beneath, the primary veins 6 or 7 pairs, strongly upwardly curved toward or into those next above; peduncles 3–4 cm. long, pedicels slender, becoming in fruit 1.5 cm. long, the cymes dichotomous; calyx 7–8 mm. broad, hispid, divided half way to the base or farther, the lobes triangular-ovate, obtuse; corolla dull white (?), glabrous, thick, divided nearly to the base, the lobes oval, obtusish, the tube appendaged with scales projecting between the anther bases; filaments 1 mm. long, the anthers 3 mm. long, 2 mm. broad, somewhat incurved, oval, apex and base rounded, pores elongated, divergent at the base, continued downward into perfect sutures; ovary oval, blackish, 1 mm. long, the style stout, 4 mm. long, the apex recurved; stigma terminal, small; fruiting calyx 7–8 mm. broad, the ovate, obtuse lobes slightly longer than the hemispherical tube; fruit (immature) very strongly reticulate-wrinkled.

Yungas, 1890 (712) = Rusby's 794, though that is a smaller-leaved form. Also collected by Pearce at Unduavi, altitude 12,000 ft., Dec. 1865.

SOLANUM GILIOIDES sp. n.

Annual, stems 6–18 cm. high, slender, bluish below, green above, pubescent; upper leaves sessile, the lower tapering very gradually into a margined petiole, including the latter 2–3 cm. long, 1.5–2 cm. broad, pinnatifid nearly to the midrib into 3 or 4 pairs of lobes which are inequilaterally and irregularly oblanceolate, obtuse, entire, the sinuses about as large and of approximately the same form, sparingly hairy and somewhat scurfy, passing gradually into the floral, which are oblong and sub-entire; racemes peduncled, hairy, the pedicels very slender, 5–7 cm. long; calyx hairy, the tube hemispherical-turbinate, a little shorter than the lance-ovate obtuse lobes which are 2 mm. long; corolla light blue, rotate, strongly reflexed, nearly twice as long as the calyx-lobes; anthers yellow, 2.5 mm. long, straight, broadly oblong, the base appendaged with two short blunt auricles, the pores looking upward and inward; ovary scarcely a mm. long and broad, truncate, the style cylindrical, stoutish, pubescent, the stigma terminal, very small.

Vic. Cochabamba, 1891 (938) = Bridges 400 from Chili and very near *S. pulchellum* Phillippi.

SOLANUM PALLIDUM sp. n.

Very pale grayish-green (herbaceous?); branches slender, flexuous, ascending, leafy, obscurely angled, scurfy-pubescent; petioles 1 cm. long, striate, margined, the blades 5–8 cm. long, 1.5–3 or 4 cm. broad, angularly ovate, more or less inequilateral,

the base rounded, but abruptly produced into the margined petiole, apex tapering, sub-acute, toward the base obscurely sinuate-toothed, thin, above minutely stellate-puberulent, more decidedly so beneath, principal veins about 8 pairs, near the margin curving upward to meet a short lower branch from that next above; peduncles 2.5 cm. long, stoutish; cymes 3–5 cm. broad, the pedicels very slender, nearly 1 cm. long, hirsute; calyx 5–7 mm. broad, lobed half way to the base, the lobes triangular, acute, densely hirsute; corolla about three times the length of the calyx, pale blue or purple, thin, puberulent without, lobed half way to the base; anthers yellow, 4 mm. long, oblong, straight, the pores directed inward; style exceeding the anthers by 2 mm., filiform, the lower half pilose and slightly thickened, the stigma capitate; fruit globose, 5 mm. in diameter, glabrous, red.

Vic. La Paz, 10,000 ft., 1889 (64) = Mandon's 406 and Rusby's 779. Near *S. Gayanum*, but has not its large fruit. The fruit is rather that of *S. radicans*. Distributed as "*S. Gayanum*."

SOLANUM INELEGANS sp. n.

A stout, coarsely much branched shrub, densely yellowish sordid-scurfy throughout; branchlets short, stout, spreading, terete; petioles varying from .5–2 cm. long, blades 6–10 cm. long, 3–4 cm. broad, ovate, base rounded, apex more or less acuminate, entire, membranaceous but somewhat rigid, stellate-scurfy both sides, especially beneath; peduncles short and stout, pedicels at flowering, 1–1.5 cm. long, thickened upward; calyx about 12 mm. broad, divided two-thirds to the base, the tube short-hemispherical, the lobes 5 mm. long, 3–3.5 mm. broad, triangular-ovate, acutish, with sinuses acute; corolla in the bud globular, tomentose without, dirty yellow, double the length of the calyx, divided nearly to the base, the lobes ovate, 8 mm. long, 5 mm. broad, obtuse; anthers 5 mm. long, broadly oblong, the dorsum presenting a regular, slight outward arch, the pores looking directly inward, continued downward into perfect sutures; ovary and style densely hirsute, the latter cylindrical, stoutish, 7 mm. long, the stigma terminal, slightly 2-lobed; fruit unknown.

Yungas, 1890 (709 and 715). Near *S. asperum*.

SOLANUM ABUTILIFOLIUM sp. n.

Densely tomentose throughout with long-branched stellate hairs, shrubby; branches ascending, elongated, stout, leafy toward the ends, terete, yellowish brown; petioles stout, ascending, 3–4 cm. long, blades 8–12 cm. long, 4–8 cm. broad, oval-ovate, the base rounded, apex abruptly short-acuminate, entire, deep brownish green above, light grey-green below, thickish, primary veins about 5 pairs, strongly ascending; peduncles about twice the length of

their petioles, simple or once forked, the flowers simply racemed, their pedicels stout, about 5 mm. long; calyx-teeth much longer than the tube, triangular-lanceolate, 3 mm. long; corolla densely tomentose without, the inner surface purple, appearing tuberculate in the dried condition, thickish, divided nearly to the base, the lobes strongly 1-nerved and veiny, lanceolate, tapering, acute, 12 mm. long, 4 mm. wide; anthers erect, linear-lanceolate, 8 mm. long, 3 mm. broad, tapering, coriaceous and rugose, the lower half slightly arching outward, the upper half straight, the pores looking outward and upward; ovary very small, densely long-hirsute, the style cylindrical, thickened upward, 4 mm. long; stigma terminal; fruit not seen.

Yungas, 1890 (373). Apparently the same as Gardner's 1787 from Ceara. Near Pearce's Coroico specimen. Near *S. verbascifolium*, but stem and indumentum differ. Distributed as "*S. pycnanthemum*."

SOLANUM VALIDUM sp. n.

Strongly woody, stellate-scurfy; branches erect, flexuose, stout, very leafy; leaves sub-sessile by a cuneate base, 5–8 cm. long, 1.5–2 cm. broad, lanceolate, blunt, finely strigose above, finely stellate-scurfy beneath, the margin irregularly sinuate, midrib coarse, prominent beneath, principal veins about 7 pairs, each connected near the margin with a descending branch from that next above; cymes sessile, 3–5 flowered, the pedicels unequal, stout, thickened upward, in flower 5–9 mm., in fruit 1.5 cm. long; calyx scurfy, the tube turbinate, the lobes linear, obtusish, foliaceous, 8–9 mm. long, 1.5 mm. broad, 4 times the length of the tube; corolla about equalling the calyx, yellowish-white, divided nearly to the base, oval, acutish, 4–5 mm. broad; anthers yellow, 4 mm. long, oblong, straight, the pores looking upward and a little inward; style filiform, one-half longer than the anthers, the stigma terminal, small; fruit spherical, 12 mm. in diameter, red, glabrous, shining.

Vic. Cochabamba, 1891 (972 flower, and 1096 fruit). Very near *S. capsicastrum*, but has larger flowers and different anthers.

SOLANUM STYRACIOIDES sp. n.

Unarmed and except the inflorescence, glabrous; stem woody, apparently reclining or perhaps climbing, flexuous, thick with large pith, becoming hollow, deep purple; petioles slender or stoutish, some of them showing a tendency to twine, 2–5 (or more?) cm. long, blades 10–15 cm. long and 6–10 cm. broad, ovate, the base rounded or abruptly slightly and often unequally produced, in Spruce's specimen some of the lower cordate, the apex blunt, thin and membranaceous, dark-green, drying brownish,

coarsely veined, tne primary about 6 pairs; panicle puberulent, terminal, 2–3 dm. long, 1–2 dm. broad, pyramidal, lax, compound, the flowers racemose, the pedicels slender, 5–8 or 10 mm. long; buds broadly ovoid when young, at maturity oblong-elliptical, 15 mm. long, 5–7 mm. broad; calyx (in flower) 5 mm. broad, scarcely 2 mm. long, saucer-shaped, truncate with 5 obscure teeth, brown, puberulent like the pedicels; corolla light bluish-brown or gray-brown, velvety without, thick, divided nearly to the base into lance-linear obtuse lobes; disk inconspicuous; stamens erect, the filaments equal in the bud, but in flowering one elongating to 6 mm. (the others 1 mm.), anthers 7 mm. long, densely granular, papillose, brown with whitish tips, oblong, straight, the pores looking upward and inward, and continued downward into perfect sutures; ovary about equalling the calyx, style nearly 1.5 cm. long, filiform, the stigma small, capitate.

Yungas, 1890 (522). Between Tipuani and Guanai, Dec. 1892 (1662) = Spruce, Tarapoto, No. 4327.

This most peculiar species of *Solanum* inclines, by its habit, appearance of inflorescence and downwardly broadened filaments toward *Cyphomandra*. In its one elongated filament it is the counterpart of the section Nycterium, with one elongated anther. This character, the paniculate inflorescense and densely papillose or warty anther furnish the characters of a new section of the genus *Solanum*, which I call ANDROPEDAS.

CYPHOMANDRA DICHOTOMA sp. n.

Habit unknown, but apparently climbing or reclining, the branches whitish, with small scattered warts and conspicuous horseshoe-shaped leaf scars, the branchlets similar, erect, flexuous, slender, slightly angled, minutely scurfy; petioles slender, but rather broadly margined, 4–6 cm. long, blades 12–20 cm. long, 6–9 cm. broad, ovate to oval, base abruptly acuminate, apex obtuse, entire, thin, minutely stellate-scurfy beneath, nearly glabrous above, principal veins about 12 pairs, nearly straight, parallel, slender, like the midrib impressed above; racemes strictly dichotomous, slender, very loosely flowered, drooping and curling, knotty-jointed at the articulation of the pedicels, which are very slender, thickened upward, 1.5 to 3 cm. long; calyx in flower hemisherical-campanulate, 3 mm. long, 5 mm. broad, very shallowly 5-lobed, the lobes very broad with rounded margin, the sinuses small and acute; corolla puberulent without, rotate-campanulate, 1.5–2 cm. broad, the lobes triangular, acute, 4 mm. long and somewhat broader; anthers 3–5 mm. long, very broad, straight, longitudinally dehiscent, without pores, the connective distinctly thickened, filaments manifest; ovary obtusely conical, slightly longer than broad, 3 mm. long, the style 5 mm. long exclusive of the oblong

stigma which is 1 mm. long; fruit globose, soft, 7 mm. in diameter as pressed.

Yungas, 1890 (519). A very distinct species, distributed as "Solanum."

Physalis Peruviana L. Sp. Pl. Ed. 2, 1670. Yungas, 1890 (301) = Rusby's 824.

Bassovia stenoloba (V. Heurck & Muell.) Britton.

Solanum stenolobum V. Heurck & Muell. Obs. Bot. 69.

Branches slender and weak, very flexuous, apparently reclining, angled, glabrous except near the ends, the leaves divergent or the lower reflexed, the principal 5–10 cm. long, 2–3 cm. broad, inequilateral, oblong-lanceolate, tapering at both ends, sessile, thin and membranaceous, deep green, sparsely and coarsely strigose below, glabrous above, the principal veins 8 or 9 on each side; reduced leaves broadly ovate, acute, inequilateral, 1–2 cm. long; pedicels solitary in the axils, filiform, reflexed, 2–3 cm. long, puberulent, dilated and somewhat 5-angled toward the calyx; flower-material insufficient for dissection; fruiting calyx pubescent, 7 mm. broad, cup-shaped, the 10 linear teeth nearly as long as the tube, borne upon a truncate margin, erect; fruit globose-ovoid, glabrous, apparently red.

Songo, Nov. 1890 (854), = Spruce's 4210, *fide* Britton. Distributed as "Brachistus."

Capsicum frutescens L. Sp. Pl. 189. (cult. form) Vic. La Paz, 10,000 ft., 1890 (200).

Acnistus oblongifolius sp. n.

Branches slender, flexuous, knotty at the nodes, blackish, branchlets light brown, puberulent, striate; petioles slender, pubescent, about 1 cm. long, blades 5–8 cm. long, 1.5–2.5 cm. broad, oblong to oblong-lanceolate, the base acuminate, apex obtuse, entire, membranaceous, bright green, glabrous both sides, the principal veins 7–9 pairs, connecting some distance from the margin; flowers fascicled, pedicels slender, 1.5–2 cm. long, pubescent; calyx (in flower) 5 mm. long and broad, hemispherical-campanulate, 5-lobed one-third of the way to the base, the lobes broadly triangular, acuminate, canescent; corolla blue, canescent, about 13 mm. long, campanulate, the lobes 5 mm. long, ovate, acutish, slightly spreading; filaments 12 mm. long, membranaceous-dilated below, filiform above, anthers ovate, obtuse, 2 mm. long; style filiform, 12 mm. long, the stigma small, capitate; fruiting calyx enlarging and partly closing over the depressed-globular fruit, the latter apparently not mature in my specimen.

Vic. Cochabamba, 1891 (993). Also collected by Pearce in

November, 1864, and nearly the same as an Ecuador specimen from Jameson. Distributed as "Poecilochroma."

Dunalia lycioides Miers, Hook. Lond. Journ. Bot. 7: 338 (1848).

Vic. La Paz, 10,000 ft., 1890 (153) = Rusby's 827, 828 and 829.

Poecilochroma punctatum (R. & P.) Miers, Hook. Lond. Journ. Bot. 7: 354 (1848). Yungas, 1890 (725 and 726).

CACABUS PARVIFLORUS sp. n.

Somewhat clammy; stems several from a thick vertical root, ascending, conspicuously jointed, sharply angled, 2–3 dm. long, slender; petioles margined, 5–15 mm. long, blades 2–5 cm. long, 1.5–3 cm. broad, ovate, the base inequilateral and slightly produced, apex blunt or sub-rounded, entire or obscurely sinuate-lobed, principal veins about 4 pairs, midrib and veins broad and coarse, membranaceous, bright green; pedicels axillary, solitary, filiform; flowering calyx campanulate with truncate or slightly intruded base, 13 mm. long, 10 mm. broad, lobed nearly half-way to the base, the lobes triangular, acute, canescent; corolla 13 mm. long, 7 mm. broad, narrowly campanulate; anthers about the length of the filaments, or a little longer, oblong, 3 mm. long; style 11 mm. long; fruiting calyx 3 cm. long, 2 cm. broad, ovoid, the base strongly intruded, the teeth erect, rigid, glabrous, with 10 principal and 10 smaller intermediate ribs, very reticulate-veiny; berry globose-ovoid, glabrous, 1 cm. long.

Vic. Cochabama, 1891 (969). Very near *C. Mexicanus* Wats. Distributed as "Physalis."

Salpichroa diffusum Miers, Hook. Lond. Journ. Bot. 7: 335 (1848).

Vic. La Paz, 10,000 ft. 1889 (50) = Rusby's 830.

Datura Tatula L. Sp. Pl. Ed. 2, 256. Capi, March, 1891 (783).

JUANULLOA MEMBRANACEA sp. n.

Branchlets and peduncles more or less roughened with thin exfoliating scales of cork; petioles 2–3 cm. long, margined, the blades 15–18 cm. long, 6–8 cm. broad, oval to obovate-oval, the base acuminate, the apex abruptly very short-acuminate or rounded, entire, membranaceous but rigid, green, when young extremely thin, above glabrous, below sparsely stellate-flecked, midrib and principal veins flat, margined, the latter about 6 pairs; peduncles 5–10 dm. long, much knotted at the flowering summit; pedicels 5 mm. long, very thick, warty; calyx 2 cm. long, parted to the base, the lobes lance-oblong little if at all acuminate, obtuse, erect; corolla 3.5 cm. long, funnelform, not ventricose, the mouth little if at all contracted, the lobes short and broad, erect (perhaps at length reflexed); filaments inserted into a densely pilose ring near the base, the anthers extending nearly to the base of the

corolla-lobes, 7 mm. long, lance-oblong, acuminate; ovary ovoid-conical, style filiform, dilated at the apex, stigma triangular-ovate; fruit ovoid-conical, obtuse, two-thirds as long as the calyx and enclosed by the latter, brown.

Yungus, 1890 (348). Distributed as "Erythrochiton?" in the absence of flowers.

JUANULLOA PEDUNCULATA sp. n.

Branches roughened with broad, thin, separating scales of cork; petioles margined and keeled, 2.5–3.5 cm. long, glabrous; blades 1–2 dm. long, 6–9 cm. broad, obovate, the base obtuse, the apex abruptly short-acuminate and acutish, entire, membranaceous, rigid, glabrous both sides, drying brown, principal veins about 6 pairs; peduncles heteromorphous (always?), the terminal densely scurfy, especially above, the lateral with narrow wings but no scurf, strongly nodose and corky at and below the summit at the insertion of the flowers, 2–3 dm. long; pedicels 5 mm. long, stout, thickened upward and continuous with the calyx, articulated with the peduncle; calyx 1.5–2 cm. long, campanulate, divided nearly to the base, the tube 5-angled, the lobes membranaceous, lanceolate, acuminate, acute, permanently erect, the leathery corolla purple-maroon, 3.5 cm. long, funnelform, above dilated and ventricose, the mouth contracted, the imbricated lobes very short and broad, rounded, erect (or perhaps at length reflexed); filaments inserted into a pilose ring near the base, somewhat compressed, the anthers reaching the base of the corolla lobes, lance-oblong, acuminate, 6 mm. long: disk inconspicuous, ovary conical-ovoid, style filiform, dilated upward, the triangular stigmas standing about the middle of the anthers; fruit brown, partly dry, ovoid, acuminate, 1–1.5 cm. long, nearly 1 cm. broad; seeds imbricated, fixed below the middle of the cuneate face, tetragonal, the truncate base ascending obliquely toward the back, obtuse, straight; embryo bluish, moderately curved; cotyledons plane, the albumen forming a similar but smaller mass, separated, at the other end of the seed.

Songo, Nov. 1891 (919).

Cestrum Parqui L'Her. Stirp. Nov. 73. Vic. La Paz, 10,000 ft 1890 (157) = Rusby's 862.

Cestrum strigillatum R. & P. Fl. Per. 2: 29. *pl. 156.* Yungas, 1890 (631) = Rusby's 815.

CESTRUM RIGIDUM sp. n.

Branches slender, whitish, branchlets greenish brown, puberulent like the petioles, peduncles and pedicels; petioles 3–5 mm. long, blades 5–8 cm. long, 12–20 mm. broad, lanceolate, the base

abruptly acuminate, the apex tapering and acute, deep green, entire or very obscurely sinuately toothed, revolute, glabrous both sides, except the midrib which is warty or papillose underneath, strongly and sharply reticulate below, rigid; flowering branchlets very slender, leafy-bracted, the lowest leaf frequently curling about the supporting branch; flowers sub-solitary, the pedicels proper scarcely 2 mm. long; calyx 3–4 mm. long, 1.5–2 mm. broad, regularly cylindrical, the lobes barely 1 mm. long and broad, triangular, acutish, pubescent; corolla glabrous, 10-nerved, the regularly cylindrical tube 2 cm. long, 1 mm. broad, with hyaline base, below adnate to the short stipe of the ovary; the funnel-shaped throat 5 mm. long, 3 mm. broad at the summit, the lobes 5 mm. long, 2 mm. broad, obtusish; filaments glabrous, except toward the base of the tube, adherent up to the base of the throat, one shorter, the anthers globose, versatile; disk hyaline, cup-shaped, 5-lobed, two-thirds the length of the ovoid light-brown angled ovary; style filiform, the stigma slightly surpassing the anthers, strongly 2-lobed; fruit not seen.

Yungas, 1890 (679). Apparently the same as Bourgeau's 2406 and also one by Jameson from Antioquia.

Its hyaline corolla-base, unequal filaments and 2-lamellate stigma appear to exclude it from this genus, but fruit is lacking.

Nicotiana glauca Grah. Bot. Mag. *pl. 2837.* Vic. La Paz, 10,000 ft. 1889 (11)=Rusby's 813.

Nicotiana undulata R. & P. Fl. Per. 2: 16. *pl. 30. f. b.* (non Vent.). Vic. La Paz, 10,000 ft. 1890 (194)=Mandon's 447, Pentland (Titicaca) and Ball (Chicla).

Schwenkia Americana H.B.K. Nov. Gen. 2: 345. *pl. 180.* La Grange, March, 1891 (749). Distributed as "Wahlenbergia."

SCROPHULARINEAE.

FAGELIA BARTSIAEFOLIA (Wedd.).

(*Calceolaria bartsiaefolia* Wedd. Chlor. And. 2: 134.) Vic. La Paz, 10,000 ft. 1889 (83) 1890 (146)=Rusby's 1055.

Fagelia virgata (R. & P.) Kuntze, Rev. Gen. Pl. 460 (*Calceolaria virgata* R. & P. Fl. Per. 1: 20. *pl. 31*). Yungas, 1890 (325)= specimens of R. & P.; also Pearce's 127, and Rusby's 1060.

Fagelia chelidonioides (H.B.K.) Kuntze, Rev. Gen. Pl. 459 (*Calceolaria chelidonioides* H.B.K. Nov. Gen. 2: 378). Yungas, 1890 (720)=Rusby's 1056.

Fagelia lobata (Cav.) Kuntze, Rev. Gen. Pl. 461. (*Calceolaria lobata* Cav. Ic. 5: 26. *pl. 443. f. 1*) Capi, March, 1890 (774)=Mandon's 459 and 461.

Fagelia Bangii sp. n.

Erect, shrubby, the branches erect, slender, straw-colored, puberulent, above narrowly winged; petioles pubescent, 3–5 mm. long, the base dilated, blade 1–2 cm. long, 6–12 mm. broad, ovate to lanceolate, the base rounded, the apex blunt, serrate-dentate with blunt ciliolate teeth, thin, above strigose but not harsh, below pale, and coarsely and transparently reticulate; peduncles terminal and in the axils of the upper leaves and bracts, erect or spreading, slender, few-flowered, angled, pubescent; flowers bright yellow, the yellowish-green pubescent calyx-lobes ovate, obtuse, 6 mm. long, the large one 5 mm. the others 3 mm. broad; corolla 2 cm. long, 1 cm. broad; filaments broad, shorter than the anther-cells, which are strictly horizontal, each nearly 1.5 mm. long, broad and obtuse; ovary conical, 2 mm. long and broad, puberulent, the style red, glabrous, flattened, 1.5 mm. long, the apex recurved; fruit not seen.

Vic. La Paz, 10,000 ft. 1889 (83a). Also near Cochabamba. Distributed as *C. bicolor*. Near *F. scabra*. Flowers larger, pedicels longer, and toothing and pubescence of leaves different than in *C. adscendens*.

Alonsoa acutifolia R. & P. Syst. Veg. 153. Vic. La Paz, 10,000 ft. 1889 (60)=Rusby's 1084 and 1085.

Leucocarpus alatus G. Don in Sweet Brit. Fl. Gard. 5: *pl. 124*. Yungas, 1890 (521)=Rusby's 2423.

Vandellia diffusa L. Mant. 89. Songo, Nov. 1891 (883)=Rusby's 1775.

Buchnera elongata Sw. Fl. Ind. Occ. 2: 1061. Yungas, 1890 (648)=Rusby's 1363.

Gerardia lanceolata (R. & P.) Benth. Comp. Bot. Mag. 1: 207. Yungas, 1890 (730)=Rusby's 1082.

Gerardia lanceolata var. La Paz, 10,000 ft. 1890 (188).

Castilleja communis Benth. in DC. Prodr. 10: 529. Yungas, 1890 (588)=Mandon's 495 and Rusby's 1097.

Castilleja fissifolia L. f. Suppl. 293. var. *pumila* (Benth.) Wedd. Chlor. And. 2: 119. Yungas, 1890 (711)= Rusby's 1088.

Bartsia inaequalis Benth. in DC. Prod. 10: 547. Yungas, 1890 (668)=Rusby's 1091.

Bartsia laxiflora Benth, in DC. Prodr. 10: 547. Yungas, 1890 (691)=Rusby's 1092 and 1089.

GESNERACEAE.

Koellikeria argyrostigma (Hook.) Regel, Fl. (1848) 250. Yungas, 1890 (275)=Rusby's 275 and 2658.

SEEMANNIA PURPURASCENS sp. n.

Herbaceous, strigose throughout, the rhizome, stem and under sides of the ternate leaves deep purple, roots fibrous, fine; petioles 5 mm. long, margined, blades 6–12 cm. long, 3–5 cm. broad, the lower as well as the upper smaller, ovate, the base rather abruptly narrowed into the petiole, the apex obtuse or acutish, sparsely serrate, the teeth very small and sharp, the midrib and veins coarse and densely white-villous underneath; pedicels stoutish, 2 cm. long, the flowers horizontal or more or less reflexed; calyx campanulate, the lanceolate long-acuminate lobes 7 mm. long, more than double the length of the hemispherical tube, with darker tips; corolla bright crimson, densely villous, 2.5 cm. long, broad-cylindrical with slightly contracted mouth, straight, the lobes very short; disk annular, fleshy, sinuate; stamens attached near the base of corolla, reaching very nearly to the lobes, the filaments membranaceous-dilated and gibbous at the base, recurved at the apex, the anthers lightly coherent, nearly square in outline, white, with a red nearly square, disk-shaped connective centrally attached and covering about half its dorsal surface; ovary ovoid-conical, compressed, hirsute, about half-adnate; fruit not seen.

Yungas, 1890 (542). Distributed as "Columnea."

GESNERA SULCATA sp. n.

Tuberous rhizome large, stem stout, erect, strongly sulcate, purple, finely strigose, sparingly erect branched; petioles very short and stout, densely hirsute, blades 4–6 cm. long, 3–4 cm. broad, ovate, acutish, crenate, thick, densely strigose above, tomentose and strigose beneath, the veins broad and coarse · fascicles rather many-flowered, the pedicels slender, unequal, 1–3 cm. long, purple, white-hispid; flowers not examined; fruiting calyx bright-purple, white-hispid, short-campanulate, the lobes erect-appressed, rigid, the 2 lower separate, 4–5 mm. long and broad (twice the length of the tube), triangular, acute, the 3 upper short, united; disk of 5 separate glands, the two upper large; capsule broadly conical, 10–12 mm. long, green, finely hispid; style persistent, on the mature fruit 3 cm. long, flattened and twisted; seeds very small, lanceolate, both ends acute, light-brown.

Yungas, 1890 (629)=Mandon's 500; also collected at Pata by Pearce. Species near *G. Lindleyi* Hook.

My specimen consists of one undeveloped leafy stem and the leafless fruiting summit of another, so that my description is necessarily incomplete and perhaps inaccurate as to size of leaves.

ALLOPLECTUS SOLITARIUS sp. n.

Glabrous, the branches coarse but weak, apparently partly decumbent or reclining, coarsely and obtusely 4-angled and sulcate, purplish; leaves 1–2 or 3 dm. long, 5–10 cm. broad, oval, below abruptly acuminate into a long petiole-like base, the apex abruptly short-acuminate, acute, the margin serrate with very small rather distant teeth, the principal veins 7 or 8 pairs, much arched and continued along the margin; flowers solitary in axils from which the leaves have fallen, the pedicels slender, about 1 cm. long, much thickened near the calyx; calyx campanulate, gibbous, nearly 3 cm. long, the tube small, turbinate, the limb membranaceous, strongly veined, purple, unequally lobed, the lobes very broad, ovate, obtuse or acutish, obscurely toothed; two of the disk-glands large, the others more or less reduced; corolla deep purple, 3.5–4 cm. long, the tube cylindrical, nearly straight, the throat not contracted, the mouth slightly oblique, lobes unequal, short, erect-spreading; free portion of the filaments shorter than the anthers, which are broadened at the apex; ovary 6 mm. long, style stout, strongly flattened.

Songo, Nov. 1890 (856).

ALLOPLECTUS, species certainly undescribed.

My specimen is so badly eaten by insects that a description is impossible. Yungas, 1890 (571). Also collected by Holton.

COLUMNEA (SYSTELOSTOMA) BOLIVIANA Britton sp. n.

Minutely strigose the branches thick but weak, apparently decumbent or reclining, obtusely 4-angled and sulcate, light brown, glabrate; petioles about 1 cm. long, stout, strigose, the blades 1 to nearly 2 dm. long, 4–8 cm. broad, obovate, the base acute, the apex short-acuminate and acute, finely serrate, minutely strigose and deep green above, obscurely strigose and flavescent beneath, the midrib strongly strigose; principal veins 8 or 9 pairs, strongly arched and continued along the margin, obscure above; pedicels axillary, solitary, shorter than the petioles; calyx nearly 1.5 cm. long, hirsute within and without, the lobes ovate, obtuse or acutish obsurely dentate, the two lower longer and narrower; corolla densely pilose, 3 cm. long, curved, the base strongly gibbous on the upper side, the limb about equally ventricose on the lower side, the mouth oblique, the lobes equal, about 2 mm. long, 4 mm.

broad, reflexed; united portion of filaments nearly 1 cm. long, free portion 1 cm., the anther-cells broadly oblong, 2 mm. long, parallel, the anthers separate; style thick, curved, much shorter than stamens, the stigma oblique, gibbous, fringed; glands in my specimen destroyed by insects.

Yungas, 1899 (515)=Rusby's 1352 and 2488, but not Rusby's 2487.

Columnea (Systelostoma) latisepala sp. n.

Branches thick but weak, light brown, narrowly winged, retrorsely hirsute, densely so above; leaves distinctly unequal, the petioles broad, 1.5–2 cm. long, densely hirsute, like the pedicels and calyx; the blades 8–12 cm. or more long, 3–8 cm. broad, oval to rotund-ovate, the base rounded or contracted, apex abruptly short and acutely pointed, margin with very small distant salient sharp teeth, the upper larger, very thin, deep green and strigose above, beneath pale, strigose and the veins hirsute, midrib and veins broad, the latter 8–10 pairs; pedicels stout, 1.5–2.5 cm. long, divergent or deflexed; calyx hirsute, nearly 4 cm. broad, 3 cm. long, amply gibbous upon the upper side, the lower side declined, the lobes herbaceous, inequilaterally ovate, somewhat acuminate, erect, serrate and ciliate; two of the disk-lobes larger, connate, separate at the apex; the handsome purple corolla 4–5 cm. long, 3–3.5 cm. broad at the mouth, strongly declined, the lobes large and rounded, spreading, the lower lacerate.

Songo, Nov. 1890 (869). A most handsome plant, unlike any other, except an undescribed species collected by Pearce.

Columnea (Collandra) ascendens sp. n.

Strigose-hirsute throughout, branches ascending, thick, obscurely angled, leaves and flowers crowded, erect-spreading; leaves sub-sessile, the minor scarcely discernible, the major 1.5–2 dm. long, 4–6 cm. broad, falcate-oblong, both ends short-acuminate, acute, closely and sharply serrulate, finely strigose both sides, veins prominent beneath, the principal about 10 pairs, elegantly curved and branched; flowers solitary, on very short and thick pedicels, mostly not bracted; calyx hemispherical in outline, 1 cm. long, 13 mm. broad, the lobes ovate, acuminate and acute, serrate, densely hirsute within and without; glands 5, the two broader united, the others longer, all minutely notched at the apex, very thick; corolla purple, hirsute, 3–4 cm. long, 1 cm. broad, straight, the lower side ventricose at and above the middle, the mouth conspicuously contracted, the orifice scarcely oblique, lobes small, erect-spreading; filaments elongated, very slender, pubescent, much contorted below; style 3 mm. long, strongly flattened, twisted.

Songo, Nov. 1890 (853). Near *C. aureonitens* Hook.

Besleria montana Britton, sp. n.

Shrubby (?), strigose and bristly-hirsute, the stems or branches ascending, obtusely quadrangular and sulcate, purplish; petioles 3–4 cm. long, broad, the blades 1.5–2 dm. long, 6–8 cm. broad, oval to ovate, base acute or short-acuminate, apex abruptly short-acuminate, minutely spinulose-toothed, sparsely and coarsely strigose both sides; flowers crowded in the axils, the flowers short-pedicelled; calyx (in flower) 1 cm. long and broad, fleshy, purple, coarsely-hirsute, divided half-way to the base, the lobes broad, with foliaceous recurved obtuse or acute tips; disk annular; corolla 1.5 cm. long, cylindraceous, somewhat curved, thick, hirsute, a distinct annulus at the somewhat oblique mouth, the base not appendaged, the very short sub-equal lobes veiny, rounded, reflexed; stamens and pistil destroyed by insects in all my flowers.

Yungas, 1890 (412) = Rusby's 2425.

Fluckigeria Fritschii Rusby, Bull. Torr. Bot. Club, 21 : 488.

Besleria foliacea sp. n.

Habit unknown, leaves and flowers crowded; leaves sub-equal, the petiole, inclusive of the narrowed base, 6–8 cm. long, blade proper 1.5–2 dm. long, ovate to oval or even obovate, below abruptly narrowed into a petiole-like base, apex abruptly short-acuminate, acute, crenate-dentate, very thin and herbaceous, strigose both sides and below sparsely pilose, the midrib broad and purple, principal veins 8–10 pairs, very coarsely and slenderly reticulate, purple underneath when young; pedicels slender, 2 cm. long; calyx-lobes 4 cm. long, 7 mm. broad, lance-linear, crenate-dentate, obtuse, very membranaceous, veiny, erect; disk sub-annular, one lobe elongated, keeled and acuminate; corolla 2.5 cm. long, ample, slightly curved, little if at all ventricose, the mouth broad, somewhat oblique, the lobes unequal, very short and broad, spreading, deeper purple than the tube; anthers short, the cells oblong, parallel; fruit perfectly 2-valved; seeds oval-ovate, obtusish at both ends, the funiculus not apparent.

Yungas, 1890 (338.) Distributed as "Alloplectus?"

Besleria ovalifolia sp. n.

Glabrous, stems apparently climbing or reclining, branches regularly quadrangular, very deeply sulcate; petioles 12–15 cm. long, thin and broad; blades 1.5–3 dm. long, 1–2 dm. broad, oval, the base rounded, very slightly bordering the apex of petiole, the apex not seen, rather sparse, thin, slightly shining, pale beneath, the midrib broad, slightly sulcate, principal veins 18 or 20 pairs, strongly curved, the salient, spinulose teeth 1 mm. long and half as broad;

peduncles very short, gray-puberulent, dividing into two short racemes, each about 8–10 flowered, the pedicels slender, about 12 mm. long, slightly thickened upward and continuous with the calyx, which is sub-urceolate, enlarging in fruit, its tube 5–6 mm. in diameter, the teeth 5–6 mm. long, triangular, abruptly long-acuminate, the sinuses acute; corolla about 11 mm. long, 7 mm. broad (as pressed) cylindraceous, straight, manifestly ventricose, the mouth contracted, slightly 2-lipped, the teeth very small; filaments inserted near the base, ribbon-shaped with broad base, much contorted, the broadly reniform anthers coherent, white with broad red disk-like connective upon the back; disk annular, the margin sub-entire; ovary depressed-ovoid, slightly ventricose, glabrous, the style stout, cylindrical, 8 mm. long, stigma capitate, dilated, 2-lamellate; capsule 7 mm. broad, depressed-globose, tipped with the style-base; placentae 4, densely seminiferous all over, the seeds rust-brown, oval or oblong, straight, both ends contracted, but obtuse.

Songo, Nov. 1890 (862).

Besleria (*?*). My single flower deformed and eaten.

Yungas, 1890 (544).

BIGNONIACEAE.

Tecoma sambucifolia H.B.K. Nov. Gen. 3: 143. Vic. La Paz, 10,000 ft. 1889 (7).

ACANTHACEAE.

Mendoncia Lindavii sp. n.

Shrubby twiner, the older branches dark brown or blackish, sparsely bristly, conspicuously angled, greatly swollen and knotted at the nodes, the rest of the plant densely ferruginous; petioles stout, 5–8 mm. long (or longer?) the older apparently twining; blades 7–11 cm. long, 3–6 cm. broad, ovate to broadly oval, the base rounded, the apex abruptly and finely acuminate, entire, above papillose-scabrous or strigose, beneath tomentose, membranaceous, coarsely reticulate, the principal veins about 5 pairs; flowers solitary or geminate, the pedicels stout, enlarged upward, strongly angled, about 2 cm. long; mature bud 4 cm. long, 1 to nearly 1.5 cm. broad, very slightly curved, oblong or linear-oblong, the abruptly acuminate apex incurved or circinate, the bracts connate, in flower opening along one side, in fruit partly by the other side also, bearing a conspicuous rib; calyx 5 mm. broad, scarcely 1 mm. long, sinuately 5-lobed, glabrous; corolla red, glabrous, 4.5 cm. long, nearly straight, the light colored tube about half its length, dilated near the base, the upper half moderately ventricose

and more than twice as broad, the lobes sub-equal, the lower a little larger, rounded, entire, erect, 4–5 mm. long; anthers sessile, inserted at about the middle of the corolla, 2 of them a little larger, 1.5 cm. long, the base 3 mm. broad, sagittate, the markedly unequal lobes rounded at the ends, nearly glabrous; disk broad and flat, reddish; ovary 3 mm. long, angled, densely pilose; style hispid below, flattened, extending to the base of the corolla lobes, dilated above, the lobes thick and broad, spreading, concave, equal; fruit tomentose, enclosed in the bracts, tipped with the entire persistent style, 2 cm. long, 1 cm. broad, oblong-obovate, inequilateral, strongly compressed, doubly keeled.

Yungas, 1890 (532) Tipuani-Guanai, Dec. 1892 (1707). Distributed as *M. puberula*, but clearly distinct as pointed out by Dr. Lindau. Rusby's 2405 is perhaps distinct, with shorter bracts, longer and more slender curved corolla, and shorter fruit.

Stenandrium dulce (Cav.) Nees in DC. Prodr. 11: 282 (*Ruellia dulcis* Cav. Ic. 6: 62. *pl. 585. f. 2*). Vic. Cochabamba, 1891 (967) = Mandon's 299 and Bridges' 326.

Probably an extreme form of the same is (891) Songo, Nov. 1891. Same collected by Tweedie.

Hansteinia crenulata Britton, Ms.

Herbaceous, glabrous, about a meter high; stems and branches very slender, erect, angled above, the internodes commonly many times shorter than the leaves; petioles slender, 1–4 cm. long, blades 1–2.5 dm. long, 4–10 cm. wide, oval to ovate-oval, base acute to cuneate, apex acuminate, margin variably, mostly obscurely crenate, very thin and membranaceous; panicle terminal, erect, narrow, loose, mostly 1–2 dm. long, 2-bracteolate at the points of branching, the pedicels slender, 5–10 mm. long, 2-bracted above the middle, the bracts small, triangular-subulate; flowers erect, spreading or partly nodding; calyx-tube very short, rotate, its broadly spreading lobes 3 mm. long, tapering regularly from the base, a little more than 1 mm. broad, acute, the sinuses acute; corolla scarlet, 2 cm. long, 5 mm. broad (as pressed), abruptly one-half contracted just above the broad base, dilated at the middle portion, the upper lip shorter, recurved and concave, entire, the lower 3-lobed, the lobes rounded, larger, erect; anthers 3.5 mm. long, scarcely equalling the style.

Yungas, 1890 (641). Songo, Nov. 1891 (875) = Rusby's 1103 and 1818.

Dr. Lindau points out that "Glockeria" is preoccupied in paleontological botany, and unites this genus with *Hansteinia*

under the latter name. While we are by no means satisfied that the groups are not generically distinct, yet we follow Dr. Lindau for the present rather than propose a new generic name.

Justicia (Dianthera) Rusbyana Lindau, sp. n. Fruticulosa (?), rami teretes, longitudinaliter sulcati, tomentelli; folia petiolis 10 mm. longis, tomentellis, oblonga, apice acuminata obtusiuscula, basi angustata, usque ad 9×3 cm., margine integro, utrinque (impris subtus ad costas) tomentello-pubescentia, cystolithis vix conspicuis; racemi axillares, breves, pedunculati, tomentelli; bracteae lanceolatae, 4×2 mm., bracteolae 3×1 mm.; calycis lobi 4, 7×1.5 mm., tomentelli; flores extus et intus ad faucem pilosi, tubo 9 mm. longo, apice 4, basi 3 mm. diametro, labio postico erecto, 8×5 mm., dentibus 2, 1 mm. longis, labio antico 10 mm. longo, 9 mm. in medio lato, dentibus 3, medio 2 mm. longo, 3 lato, lateralibus 1.5×2 mm. obtusis; filamenta 2, 7 mm. longa, antheris subsuperpositis, loculis 1 mm. longis, obtusis; pollinis granula typica, 42 μ. longa, 16–23 μ. lata; ovarium 2 mm. longum; disco 1 mm. longo; stylus 13 mm. longus, stigmate subbilobo; capsula ignota.

Affinis *J. laeviligni* (Nees) Lindau, sed pube et foliorum forma longa diversa.

Yungas, 1890 (379).

VERBENACEAE.

Lantana velutina Mart. et Gal. Bull. Acad. Brux. 1: 325. Yungas, 1890 (585) = Rusby's 922 and 923.

Lantana lilacina Desf. Cat. Hort. Par. Ed. 3, 392.

The larger leaved form. Yungas, 1890 (219) = Rusby's 925.

Lantana Camara L. (?) Corolla-tube much curved, much dilated, the lobes small and crumpled, the anthers too broad. Yungas, 1890 (469).

Lippia scorodonoides H.B.K. Nov. Gen. 2: 269. Vic. La Paz, 10,000 ft., 1889 (5) = Rusby's 920.

Lippia Boliviana sp. n.

Branches clothed with slender exfoliating strips of bark, brown, terete, the branchlets very numerous and slender, erect, 1.5–2.5 dm. long, purplish, obscurely quadrangular, the internodes 1 to nearly 2 cm. long, very minutely scabrate; leaves thick and rigid, sub-petioled by the narrowed base, 1.5–2.5 cm. long, 3–7 mm. broad, oblanceolate, the base cuneate, apex rounded and retuse, obscurely serrate toward the apex, the teeth blunt, thick and rigid, revolute, beneath purple-reticulate, above rugose and papil-

lose; peduncles axillary, solitary, 4–10 mm. long, very slender, papillose; heads 4 mm. long, 5–6 mm. broad, the scales closely appressed, oval-obovate, strongly concave, acute, ciliate; calyx ovoid, nearly 2 mm. long, densely hispid, 2-fid, the teeth minutely notched; corolla 4 mm. long, whitish, pubescent, funnelform, 4-lobed, the upper lobe deeply cleft, the lower obovate, longer than broad; ovary oval, about as long as the style, together 2 mm. long, the stigma lateral, not so large as in the next; mature fruit not seen.

Vic. Cochabama 1891 (979).

LIPPIA FIMBRIATA sp. n.

Appressed-hairy, branches elongated, ascending, slender, terete, light yellowish-green, the leaves opposite or ternate; petioles about 5 mm. long and nearly as broad, leaves 2.5–5 cm. long, 1.5–3 cm. broad, ovate, the rounded base very abruptly contracted into the petiole, apex obtuse or acutish, coarsely serrate with large appressed teeth, thick and rigid, coarsely strigose both sides, the hairs yellowish; midrib and 2–3 pairs of nerve-like veins very prominent beneath; peduncles axillary, solitary, erect or ascending, naked, 8–10 cm. long, slender; heads about 1 cm. long, 1.5 cm. broad, the flowers little exceeding the closely appressed involucre, its scales similar in shape to the leaves, sessile, entire; calyx globose, 1 mm. long, the margin truncate, beautifully setose-fimbriate; corolla dull white, 5 mm. long exclusive of the lip, the tube puberulent, strongly curved, its lower third contracted, the mouth slightly contracted, its large lobe fan-shaped, 3 mm. broad, 2 mm. long, 3–4 times as large and thinner than the others, the margin slightly erose; stamens reaching to the middle of the tube, much exceeding the style; ovary broadly oblong, light brown, glabrous, about as long as the style, the stigma lateral, half the length of the style, oblong-expanded; fruit globular, crustaceous, entirely enclosed in the calyx, with a contracted, flattened, 2-winged base.

Vic. Cochabamba, 1891 (973). Named in reference to the beautifully fimbriate calyx.

Its calyx and stigma are those of *Lantana*, while in habit, corolla, and especially fruit, it is a perfect *Lippia*.

Valerianodes Cayennense (Vahl) Kuntze, Rev. Gen. Pl. 509 (*Stachytarpheta Cayennensis* Vahl, En. 1: 208.) Yungas, 1890 (208).

Verbena microphylla H.B.K. Nov. Gen. 2: 272. Vic. La Paz, 10,000 ft. 1890 (161 and 161a) = Mandon's 525.

Verbena hispida R. & P. Fl. Per. 1: 22. *pl. 34. f. a.* Vic. La Paz, 10,000 ft. 1889 (8).

Verbena littoralis H.B.K. Nov. Gen. 2: 276. Vic. La Paz, 10,000 ft. 1890 (204) = Rusby's 89 and 90.

Verbena Bonariensis L. Sp. Pl. Ed. 2, 28. Vic. La Paz, 10,000 ft. 1889 (136).

Ægiphila arborescens (Aubl.) Vahl, Ecl. 1: p. 15. Yungàs, 1890 (584) = Rusby's 2458.

ÆGIPHILA SETIFORMIS sp. n.

Branches much elongated, slender, ascending, greenish, obscurely 4-angled, minutely puberulent, the younger parts pubescent, internodes 5–6 cm. long; petioles 4–10 mm. long, thick, the blades 10–12 cm. long, 3–5 cm. broad, ovate to lance-ovate, the base rounded and faintly inequilateral, the apex tapering or somewhat abruptly acuminate, entire, strigose on the veins, almost imperceptibly so elsewhere, shining, especially underneath, membranaceous, rigid, sharply veined, the principal veins about 8 pairs, highly curved, produced and connecting along the margin; panicle sessile or sub-sessile, at first hemispherical, becoming ovoid-pyramidal with dense rounded summit, the lower branches becoming distant and peduncled, the flowers nearly sessile; bracts lance-linear, not conspicuous; calyx 4 mm. long, 3 mm. broad, hispid, divided to the middle, the tube turbinate, the 4 lobes erect, equal, ovate, acute; corolla-tube 6 mm. long, cylindrical, equal, straight, the limb 7 mm. broad, the 4 lobes obovate with rounded apex; filaments about as long as the anthers; ovary 1 mm. long and nearly as broad, 4-lobed and 4-grooved, on a short thick base, the style 1.5 cm. long; fruit light brown, slightly shining, ovoid with umbilicate apex and base, 6 mm. long, 5 mm. broad, the lower two-thirds closely invested by the calyx.

Songo, Nov. 1890 (878a). Near *Æ. cuspidata*.

Clerodendron fragrans Vent. Jard. Malm. *pl. 70* (1803–1805). Vic. Cochabamba, 1891 (975).

LABIATAE.

MARSYPIANTHES CHAMAEDRYS (Vahl) (*Clinopodium Chamaedrys* Vahl, Symb. 3: 77.—*Marsypianthes hyptoides* Mart. ex Benth. Lab. 64). Yungas, 1890 (654).

Mesosphaerum arboreum (Benth.) Kuntze, Rev. Gen. Pl. 526. (*Hyptis arborea* Benth. in DC. Prodr. 12: 132); without flowers and deformed. Songo, Nov. 1891 (836).

Mesosphaerum eriocephalum (Benth.) Kuntze, Rev. Gen. Pl. 526 (*Hyptis eriocephala* Benth. in DC. Prodr. 12: 124). Vic. Cochabamba, 1891 (976) = Rusby's 1404.

Mesosphaerum odoratum (Benth.) Kuntze, Rev. Gen. Pl. 526. (*Hyptis odorata* Benth. Lab. 81). Yungas, 1890 (270a) = Rusby's 1417.

Mesosphaerum Yungasense Britton, sp. n.

Herbaceous, ferruginous-tomentellate; stems strongly but not acutely quadrangular, deeply sulcate, purple, erect, widely branching; petioles about one-third as long as the blades, the latter 3–5 cm. long, 1.5–3 cm. broad, broadly ovate, the base broadly cuneate, apex obtuse or obtusish, coarsely serrate with blunt teeth, rigid, above rugose and scabrous, below ferruginous-tomentellate; panicles 3–4 dm. long, 2–3 dm. broad, pyramidal, very open, the branches distant; heads 5 mm. in diameter, nearly sessile, few-flowered, their supporting branchlets spiciform, cylindrical and obtuse, the lower heads distant, the lanceolate bracts half as long as the heads; bractlets of the head obovate, obtusish, about 3 mm. long, like the calyx densely setose-hispid; calyx (in young fruit) as long as the bractlets, narrowly campanulate, the 5 nearly equal subulate teeth half as long as the tube; corolla one-half longer than its calyx, 2-lipped, the upper lip about equally 3-lobed, the lower saccate, larger, obscurely dentate; apex of style recurved.

Yungas, 1890 (622) = Rusby's 1410.

Mentha aquatica L. Sp. Pl. 576. Vic. La Paz, 10,000 ft., 1889 (137).

Bystropogon canus Benth. Lab. 326. Vic. La Paz, 10,000 ft. 1889 (48) = Rusby's 1406. Mr. Bang's No. 575 from Yungas, 1890, is, perhaps, of the same species, though the flowers are smaller and floral leaves are different, as also the toothing of the leaves.

Hedeoma Mandoniana Wedd. Chlor. And. 2: 148. Capi, March, 1891 (785) = Rusby's 1497.

Alguelagum conferium (Benth.) Kuntze, Rev. Gen. Pl. 512. (*Sphacele conferta* Benth. Pl. Hartw. 244.) Yungas, 1890 (689).

Alguelagum parviflorum (Benth.) Kuntze, Rev. Gen. Pl. 512. (*Sphacele parviflora* Benth. in DC. Prodr. 12: 256.) Yungas, 1890 (686).

Alguelagum tenuiflorum (Benth.) Kuntze, Rev. Gen. Pl. 512. (*Sphacele tenuiflora* Benth. in DC. Prodr. 12: 257.) Vic. La Paz, 10,000 ft. 1890 (167) = Rusby's 1407 and 1411.

Salvia tiliaefolia Vahl, Symb. 3: 7. Yungas, 1890 (310).

Salvia Bangii sp. n.

Shrubby, much branched, the branches ascending, slightly canescent, sharply 4-angled; leaves on the older parts smaller, rugose and rigid; petioles of the others slender, 5–10 mm.

long, the blades 4–6 cm. long, 1–2.5 cm. broad, lanceolate, the base broadest, rounded or sub-truncate to very abruptly cuneate, apex somewhat abrupt, but acutish, from coarsely to finely crenate-serrate, papillose or strigose above, puberulent beneath, green, membranaceous, the veins slender and inconspicuous (except as above stated), the principal 5 or 6 pairs; peduncles solitary, terminal, unbranched, 3–4 cm. long; verticils few and rather distant, about 6–8-flowered; pedicels very short, spreading; flowering calyx 6–7 mm. long, about half as broad, in fruit slightly enlarged, sharply nerved, the nerves bluish; corolla apparently light blue or whitish, exceeding the calyx by about 1 cm., widely ringent, the lower lip about one-half longer than the upper; my specimens too badly damaged to permit of dissection.

Vic. Cochabamba, 1891 (980). Also collected by Bridges.

Salvia Rusbyi Britton, sp. n.

Weak and slender, minutely puberulent above, widely branching, the branches brownish; petioles 2–4 cm. long very slender, mostly deflexed, the under side ribbed; blades 8–11 cm. long, 4–6 cm. broad, ovate, in the type inequilaterally and rhomboidally ovate, the base rounded to sub-cordate and slightly unequal, apex abruptly acuminate and acute, rather sharply serrate, glabrous both sides, finely reticulate, pale beneath, the midrib toward the base dilated and ridged on the under side, the principal veins 5–6 pairs, 3 pairs starting from near the base, membranaceous and very thin; raceme terminal, peduncled, weak, simple, the flowers approximate, the pedicels 4–5 mm. long, erect, dilated upwards; calyx puberulent, very strongly ribbed, 12 mm. long, 4 mm. broad (as pressed), lipped nearly half way to the base, the erect or even slightly converging teeth strongly acuminate and pungent; corolla scarlet, pubescent, exceeding the calyx 4–4.5 mm., the tube slenderly funnelform, slightly curved and very slightly ventricose, the rather broad lips 5 and 8 mm. long respectively; stamens exceeding the longer lip 5–8 mm., the anthers about 3 mm. long; style exceeding the anthers 5–7 mm., one division 4 mm. the other 2.5 mm. long.

The type is Rusby's No. 2414, from which this description is taken.

Yungas, 1890 (422). Differs from the type in its rounded ovate more acuminate smaller leaves and smaller flowers, but clearly of this species.

Salvia sp.

Vic. La Paz, 10,000 ft., 1889 (37 in part, with small thick rigid leaves and small flowers) = Rusby's 2439.

Salvia sp.

Vic. La Paz, 10,000 ft., 1889 (37 in part, with lanceolate elongated thin flaccid leaves and large flowers) = Rusby's 1496.

Whether this group of scarlet *Salvias* of the La Paz region, represented also by Mandon's 710, and specimens by Pearce and Bridges, forms a single polymorphous species, or a number of distinct ones, I am not as yet prepared to decide. Under the impression that the former view was correct, Dr. Britton has proposed a name dedicated to Bridges, the first collector. The same view was taken by myself until the moment of preparing these notes for press, but it now appears probable that at least two species are represented. Which of these represents Bridges' collection I cannot now determine, and the point must go over for further comparison.

Perilomia ocymoides H.B.K. Nov. Gen. 2: 328. Yungas, 1890 (358).

PLANTAGINEAE.

Plantago major L. Sp. Pl. 112. Vic. La Paz, 10,000 ft., 1889 (12) = Mandon's 536 in part, and Rusby's 668; 1890 (156) = Mandon's 737.

Plantago Virginica L. Sp. Pl. 113. (?) Vic. La Paz, 10,000 ft., 1889 (87).

Plantago sericea R. & P. Fl. Per. 1: 51. *pl. 79. f. b.* Vic. La Paz, 10,000 ft., 1889 (94).

Plantago lanceolata L. Sp. Pl. 113. Vic. La Paz, 10,000 ft., 1889 (125).

NYCTAGINEAE.

Mirabilis Jalapa L. Sp. Pl. 177. Yungas, 1891 (480).

Oxybaphus micranthus Choisy in DC. Prodr. 13: 2, 432. Vic. La Paz, 1889 (36).

Wedelia incarnata (L.) Kuntze, Rev. Gen. Pl. 534. (*Allionia incarnata* L.). Vic. Cochabamba, 1891 (928).

Boerhaavia viscosa Lag. & Rod. Anal. Cienc. Nat. 4: 256, n. 12 (1801). Vic. Cochabamba, 1891 (957) = Spruce's 4509, Mandon's 1008 and apparently Hayes' 732.

Collignonia parviflora (H.B.K.) Choisy in DC. Prodr. 13: 2, 439. Yungas, 1890 (699 and 710).

ILLECEBRACEAE.

Pentacaena ramossissima (Weinm.) H. & A. in Hook. Bot. Misc. 3: 338 (1833). Vic. La Paz, 10,000 ft., 1889 (93).

Herniaria setigera Gillies in Hook. Bot. Misc, 3: 337 (1833). Yungas, 1890 (524).

AMARANTHACEAE.

Amaranthus chlorostachys Willd. Amarant. 34. *pl. 10. f. 19.* Yungas, 1890 (231) = Mandon's 1018 and Spruce's "Peru bor." in Herb. Kew.

Amaranthus muricatus Gillies ex Moq. in DC. Prodr. 13: 2, 276. Vic. Cochabamba, 1891 (952) = Miers', Buenos Ayres 1410.

Amaranthus retroflexus L. Sp. Pl. 991. Yungas, 1890 (732) = Miers', Buenos Ayres 1404. Also (?) Vic. La Paz, 1889 (97).

Achyranthes aspera L. Sp. Pl. 204, var. Yungas, 1890 (505).

Guilleminia densa (Willd.) Moq. in DC. Prodr. 13: 2, 338 (*Illecebrum densum* Willd.; R. & S. Syst. Veg. 4: 517 = *G. illecebroides* H.B.K. Nov. Gen. 6: 42. *pl. 518*). Vic. La Paz, 10,000 ft., 1889 (22).

Telanthera Mexicana (Sch. Bip.) Moq. in DC. Prodr. 13: 2, 372. Yungas, 1890 (682) = Mandon's 1015, Linden's 72, Vera Cruz and Matthews 2058, Peru.

Alternanthera repens (L.) Steud. Nom. Ed. 2, 1, 65 (*A. Achyrantha* R. Br. Prod. Fl. Nov. Holl. 1: 417). Vic. Cochabamba, 1891 (963).

Alternanthera Boliviana sp. n. (954).

Stems prostrate, creeping widely, slender, much branched, matted, reddish, compressed, coarsely sulcate, glabrous or sparsely pilose about the joints and ends; leaves conspicuously unequal, 5–12 mm. long, 4–8 mm. broad, oval to spatulate-oval, base abruptly narrowed, then tapering into a short petiole, apex blunt, or some with an acutish point, entire or obscurely sinuate, thickish, beneath minutely papillose or granular, the veins obscure; heads closely sessile, globose-obovoid, moderately compact, 7–10 mm. long, the apex rounded; bracts broadly oval, concave, 2.5 mm. long, obscurely lacerate; bractlets of equal length, laterally compressed, keeled, acute, one side narrower; outer perianth segments 4 mm. long, broadly oval, the apex rounded, strongly 3 or 5-ribbed, the inner equal in length, narrower, otherwise similar,

folded; stamen-tube shorter than the ovary, bearing 5 oblong appendages between the filaments, and only about one-fourth the length of the latter; fertile filaments 3, the anthers reaching about to the middle of the perianth, about double the length of the brown strongly compressed ovary, which is nearly twice as broad as long, shortly stipitate and with a large capitate sessile stigma; fruit two-thirds as long as the perianth, slightly emarginate.

Vic. Cochabamba, 1891 (954). Near *A. paronychioides* St. Hil.

Gomphrena glabrata (Mart.) Moq. in DC. Prodr. 13: 2, 388. Yungas, 1890 (255).

Gomphrena Gardneri Moq. in DC. Prodr. 13: 2, 404 (?). Apparently a young state of Gardner's 2293. Vic. Cochabamba, 1891 (932).

Gomphrena decumbens Jacq. Hort. Schoenb. *pl. 482* (?). Vic. Cochabamba, 1891 (933). The same as specimens collected by Pearce, Bridges and Simcaya, and Glaziou's 11,425.

Gomphrena acaulis Remy, Ann. Sci. Nat. (3) 6: 350 (1846). Talca Chugiaguilla, April, 1891 (812) = Mandon's 1017; also a specimen by Pearce, but not that of Bridges with deep brown calyx.

Iresine celosioides L. Sp. Pl. Ed. 2, 1456. Yungas, 1890 (228, 477 and 643).

CHENOPODIACEAE.

Chenopodium foetidum Schrad. in Mag. Ges. Naturf. Fr. Berl. 2: 79 (1808). Talca Chugiaguilla, Apr. 1891 (799). Vic. Cochabamba, 1891 (1004).

Chenopodium Quinoa Willd. Sp. 1: 1301. Vic. La Paz. 1889 (61).

Chenopodium murale L. Sp. Pl. 219. (?). Vic. La Paz. 1890 (199).

Chenopodium ambrosioides L. Sp. Pl. 219. Vic. La Paz, 1889 (3). Yungas, 1890 (281).

Chenopodium Chilense Schrad. Ind. Sem. Hort. Gott. 2 (1832). Vic. La Paz, 1889 (52).

Atriplex cristata Willd. Sp. 4: 959 (1805). H.B.K. (1817). Vic. La Paz, 1889 (84).

ATRIPLEX RUSBYI Britton sp. n.

Odor resinous; thinly and compactly scurfy, the branches numerous, erect, elongated, slender, flexuous, terete, whitish, the internodes about two-thirds as long as the leaves; petioles very stout, 2–4 mm. broad; blades 10–25 mm. long, 12–25 mm. broad,

irregularly triangular, the base varying from shortly produced to truncate or sub-cordate, the apex blunt, margin irregularly and angularly several-toothed, very thick, 3-nerved from near the base, mostly with a second strong pair of veins above the middle; spikes sessile, simple or branched, blackish, interrupted, the glomerules globular, sessile, 3–4 mm. in diameter; staminate flowers with perianth segments 5, less than 1 mm. long, orbicular-spatulate, strongly concave, thick, black-mottled without; fertile stamens 5, at length exserted and pistil not perceptible; pistillate flowers and fruit not seen.

Vic. La Paz, 10,000 ft., 1889 (181) = Rusby's 1529.

PHYTOLACCACEAE.

Rivina laevis L. Mant. 3. Yungas, 1890 (574).

Villamilla racemosa Britton, n. sp.

More or less bristly hairy throughout, very dark; petioles broad, 2–3 cm. long, blades 8–15 cm. long, 3–6 cm. broad, oblong-ovate, obscurely crenulate, thin, much recticulate with very dark veins, the upper surface glabrate, the base more or less narrowed but obtuse, apex acuminate or acute; racemes peduncled, elongated, tapering and acute, becoming loosely flowered; pedicels solitary, subulate-bracted from the rhachis, only 5–7 mm. long, divaricate; bud oblong, perianth blackish (as dried) 4 mm. long, striate, mostly reflexed in anthesis; stamens 8 or 12 (mostly 8), the filaments longer than the pistil.

Yungas, 1890 (414) = Rusby's 743. According to Dr. Britton, not the same as a specimen collected by Pearce at the same locality.

Petiveria alliacea L. Sp. Pl. 342. Yungas, 1890 (506).

Phytolacca icosandra L. Sp. Pl. Ed. 2, 631. Yungas, 1890 (486).

POLYGONACEAE.

Polygonum lacerum H.B.K. Nov. Gen. 2: 179 (?). Vic. La Paz, 10,000 ft., 1889 (130).

Rumex crispus L. Sp. Pl. 335. Vic. La Paz, 1889 (51).

Rumex conglomeratus Murray, Prodr. Fl. Gott. 52. Vic. Cochabamba, 1891 (955).

Sarcogonum fruticulosum (Walp.). (*Polygonum fruticulosum* Walp. Nov. Act. Ac. Leopold, 19 [1843]: Supp. 1, 407. *Muehlenbeckia rupestris* Wedd., Ann. Sci. Nat. [III.] 13 [1849]: 256.) Vic. La Paz, 1889 (132).

SARCOGONUM VULCANICUM (Endl). *Muehlenbeckia vulcanica* Endl. Gen. Suppl. 4: 51. Vic. Cochabamba, 1891 (41).

Uvifera polystachya (Wedd.) Kuntze, Rev. Gen. Pl. 562. Yungas, 1890 (299).

PIPERACEAE.

(By Dr. Casimir de Candolle.)

Piper Bangii C. DC. Bull. Torr. Bot. Club, 19: 254. Yungas, 1890 (380).

Piper angustifolium R. & P. Fl. Per. 1: 38. "Matico," U. S. P. Yungas, 1890 (215).

Piper Lechlerianum C. DC. Prodr. 16: 2, 269. Yungas, 1890 (345).

Piper Bolivianum C. DC. Prodr. 16: 2, 280. Yungas, 1890 (540).

Peperomia trinervis R. & P. Fl. Per. 1: 32. *t. 50. f. b.* Yungas, 1890 (331).

Peperomia nudicaulis C. DC. Bull. Torr. Bot. Club, 19: 48. Yungas, 1890 (331, a).

Peperomia Hilariana Miq. Syst. 89. Yungas, 1890 (224).

Peperomia Brittonii C. DC. Bull. Torr. Bot. Club, 19: 254. Yungas, 1890 (329).

Peperomia fragrans C. DC. Seem. Jour. Bot. 1866: 140. Yungas, 1890 (330).

Peperomia Bangii C. DC. Bull. Torr. Bot. Club, 19: 49. Yungas, 1890 (330, a).

CHLORANTHACEAE.

TAFALLAEA GLABRATA (H. B. K.) (*Hedyosmum glabratum* H. B. K. Nov. Gen. 7: 165). Yungas, 1890 (388).

MONIMIACEAE.

Siparuna limoniodora (R. & P.) DC. Prodr. 16: 2, 646. Yungas, 1890 (352).

SIPARUNA NIGRA sp. n.

Glabrous except the upper leaf-surfaces, the branchlets blackish, slender, spreading, terete, little flattened at the joints, the internodes many times shorter than the leaves; petioles about half the length of the internodes, divaricate or reflexed; the blades 8–12 cm. long, 3–5 cm. broad, the base cuneate, the apex abruptly acuminate, acutish or obtuse, minutely spinulose-toothed, the teeth

cartilaginous, drying blackish, above very minutely strigose, thin but somewhat rigid, the primary veins 6–7 pairs; cymes sessile or peduncled, solitary or geminate, few-flowered, reflexed, the pedicels 1–2 mm. long, in fruit becoming 2 cm. long, fleshy, thickened upward; calyx black, 4 mm. broad, the tube turbinate, 2 mm. long, fleshy, the limb 5-lobed, the lobes short and rounded; disk in the staminate flowers closed over the stamens, the flat surface centrally perforated, the stamens numerous, imbricated in about 4 series, broadly dilated, the anther sub-sessile, pistil none; pistillate flowers very much smaller, central in the cymule; fruit black, fleshy, globose-pyriform, 1.5 cm. broad (as pressed and dried) at maturity.

Songo, Nov. 1890 (844), in flower and Mapiri, July–Aug. 1892 (1523) in fruit = Fendler's 2358 (second collection) from Tovar, Venezuela.

LAURINEAE.*

Nectandra globosa (Aubl.) Mez, Laur. Am. 415. (*Laurus globosa* Aubl. Pl. Gui. ♣: 364.) Yungas, 1890 (488 and 688).

Persea scoparia Mez, Arb. Bot. Gart. Breslau, 115. Yungas, 1890 (501).

Persea coerulea (R. & P.) Mez, Jahrb. k. Bot. Gart. 5: 171. Yungas, 1890 (300.) Songo, Nov. 1890 (833).

LORANTHACEAE.

Loranthus concinnus Mart. in Schult. Syst. 7: 170. (*Struthanthus concinnus* Mart. Flora, 1830: 1, 104.) Yungas, 1890 (213).

Loranthus eugenioides H.B.K. Nov. Gen. 3: 435. Vic. La Paz, 10,000 ft., 1889 (6).

Loranthus verticiliatus R. & P. Fl. Per. 3: 47. Vic. La Paz, 1889 (139) = Mandon's 1469 and Pearce's from Orubamba, Jan. 1867.

Loranthus punctatus R. & P. Fl. Per. 3: 47. *t. 277. f. a.* Yungas, 1890 (705).

LORANTHUS FLEXILIS sp. n.

Glabrous, somewhat glaucous, pale, the branches much elongated, slender, variously curved, finely many-striate, scarcely broader at the nodes; petioles broad, about 1 cm. long, the blades, in flowering stage 2–3 cm. long, 1–2 cm. broad, in fruiting stage 3–5 cm. long, 2–3 cm. broad, oval-elliptical to obovate, base

* Kindly determined by Dr. Carl Mez.

rounded to acute, apex rounded to very slightly pointed, entire, thick and coriaceous, spreading or reflexed; spikes very loose and interrupted, short-peduncled, rarely equalling or exceeding their leaves; flowers sub-sessile, solitary or 2 or 3 together; buds pyriform, 5-angled; flower yellowish, 3 mm. long; calyx 1 mm. long, 1.5 mm. broad, the dark tube hemispherical, the light-colored limb spreading, sinuate; corolla 5-parted to the base, the segments 3 mm. long, 1 mm. broad, oblanceolate, the apex rounded, plane or slightly concave, thick; filaments very short and broad, inserted about the middle of the corolla-lobes, the anther short, nearly as broad as the corolla-lobe, immovable, the apex oblique, the thickened connective projecting above; style 2 mm. long, stout, thickened at the middle portion, the stigma oblique; drupe blue, fig-shaped, 1 cm. long, 6 mm. broad, on a fleshy, clavate pedicel half its length.

Yungas, 1890 (468) in flower, and between Tipuani and Guanai, Dec., 1892, in fruit (1659). Near *L. orbicularis*. Nearly Jenman's 1035 and 4410.

Phoradendron coriaceum Mart.; Eichl. Fl. Bras. 5: 2, 121. Yungas, 1890 (363).

Phoradendron Mandoni Eichl. Fl. Bras. 5: 2, 124. Yungas, 1890 (657) = Rusby 1387.

PHORADENDRON BRITTONIANUM sp. n.

Very fleshy, glabrous, stems elongated, curving, branchlets sharply quadrangular, at the nodes compressed, moderately broadened (about one-half broader) and narrowly winged; petioles very stout, 5–7 mm. long, the blades 5–7 cm. long, 3.5–5 cm. broad, oval, the base very abruptly narrowed, the apex rounded, entire, reddish-brown, very thick, the primary veins 2 or 3 pairs, obscure; spikes 3–5 in each axil, at the base 2–several pairs of empty bracts, the mature joints nearly 1 cm. long, and, including the flowers about as broad, the rhachis blackish, the bracts greenish, triangular-ovate, connate, nearly equalling the perianth, which is 3–parted, well immersed, 3 mm. broad when expanded, ruby-red, translucent, much thickened, the lobes triangular with rounded apex, 2 mm. broad, 1.5 mm. long; ovary entirely immersed, the circular stigma not elevated above the surface; staminate flowers and fruit not seen.

Yungas, 1890 (632).

SANTALACEAE.

Quinchamalium majus Brogn. Voy. Coquille, *t. 51. f. a.* Capi, Mar. 1891 (761).

EUPHORBIACEAE.

Euphorbia hypericifolia L. Sp. Pl. 454 (?) Vic. La Paz, 10,000 ft., 1889 (2).

Euphorbia Peplus L. Sp. Pl. 456. Vic. La Paz, 10,000 ft., 1889 (46).

Euphorbia geniculata Orteg Hort. Matr. Dec. 18. Yungas, 1890 (232) = Rusby 891 and 892.

Euphorbia pilulifera L. Sp. Pl. 454. Yungas, 1890, (591).

Euphorbia (*Stachidium*?) specimen in fruit, not matched at Kew, but diagnosis cannot be made out.

Yungas, 1890 (619).

EUPHORBIA (CROSSADENIA) CYMBIFORMIS sp. n.

Shrubby, glabrous, the branches very numerous, erect, elongated, slender, glaucous, terete, the leaves (except the upper bracteose ones) alternate, imperfectly present in my specimens, apparently sessile, broadly ovate and 3–5-nerved, reddish like the bracts, which are distinct, but in the dried specimen appearing as though connate, the pair forming a boat-shaped involucre, triangular-ovate, acute, entire, thickish, glaucous, the lower 2 cm. long, 1.5 cm. broad: peduncles solitary, 1 mm. long, stout, the involucre 4 mm. long, 3 mm. broad, urceolate, 5-lobed nearly half-way to the base, the lobes hyaline, rounded, fimbriate; glands 4, exceeding the lobes, their broad stalks about equalling the latter, reddish, the upper surface oblique, concave, posteriorly with 2 short blunt lobes; filaments at length about equalling the involucre and the stipe of the ovary; ovary 6-costate, 3 of the ribs produced; fruit deeply 3-lobed, 4 mm. long and slightly broader, light brown, minutely granular; seed 2.5 mm. long, 1.5 mm. broad, tetragonal, 2 faces concave, 2 convex and bluntly ridged, greenish-gray, strongly muricate and granular.

Talca Chugiaguilla, Apr. 1890 (794).

Euphorbia (sp. n. ?) near *E. zygophylloides* Boiss. Vic. Cochabamba, 1890 (930).

Phyllanthus lathyroides H. B. K. Nov. Gen. 2: 110. Yungas, 1890. (335).

HIERONYMA RETICULATA (Pl.) Britton (*Antidesma reticulata* Pl.) Yungas, 1890. (383)=Matthews', Peru, 1562.

Jatropha Curcas L. Sp. Pl. 1006. Yungas, 1890 (626)=Rusby's 889.

Croton glandulosus L. Syst. Ed. 10, 1275, var. Yungas, 1890 (471).

Croton Boliviensis Muell. Arg. Linnaea, 34: 91 (1865–'66). Vic. Cochabamba, 1891 (971). Same collected by Bridges.

Croton (Eucroton) Bangii sp. n.

Suffrutescent, much branched from the base; stems ascending, slender, 3–5 dm. high, terete, scurfy, yellowish-white; petioles 3–5 mm. long, blades 2–3.5 cm. long, 1–2 cm. broad, oblong to obovate, the base slightly narrowed, apex rounded, entire, above dark green and lepidote, below densely silvery-scurfy, thick, rigid, involute in drying, principal veins about 10 pairs, straight; racemes in the upper axils on peduncles about 5 mm. long, becoming loose and about 3 cm. long, the rhachis angled by the decurrent pedicels; staminate flowers smaller than the pistillate, the sepals broader; petals white, delicate, nearly as long as the sepals, oblanceolate, acute; disk small, inconspicuous; stamens 15, about equalling the petals; pistillate flowers: pedicels very short, erect or recurved, calyx urceolate-campanulate, 3 mm. long, 2 mm. broad, parted two-thirds to the base, the lobes oblong-lanceolate, acute; disk cup-shaped, shallow, thick, shallowly 5-lobed, bearing 5 very small projecting globose green shining glands in the sinuses; petals none; ovary densely scurfy, about half as long as the calyx, the 3 styles 2-cleft nearly to the base, exceeding the calyx, stout, stellate-scurfy, at the base diverging, the stigmas connivent and circinate, brown; seeds oblong, brown, glabrous, shining.

Unduavi, March, 1891 (745).

Croton (Eutropia) piluliferum sp. n.

A tall shrub, the branchlets short and stoutish, widely divergent, densely rusty-lepidote and sparsely pilose, striate; petioles angled, extremely variable in length, reaching to 6 cm. or more; stipules ovate, 5 mm. long, blades 8–15 cm. long, 5–11 cm. broad, ovate-cordate, the sinus slight, abruptly short-acuminate, the margin more or less sinuate, above scabrous, below white (when young yellow) stellate-scurfy, the principal veins about 8 pairs, 2 or 3 pairs radiating from near the base, connected by parallel wavy secondary ones, slender, but prominent below; basal glands small, inconspicuous; racemes terminal, solitary, 10–15 cm. long, the peduncles 3–4 cm. long, angled, the flowers mostly geminate, on pedicels 3–4 mm. long, the buds globose, 2 mm. in diameter; staminate flowers: the calyx 5-parted nearly to the base, the segments nearly 3 mm. long, 2 mm. broad, ovate, obtuse, equal; petals exceeding the calyx by 1 mm., oblong-elliptical, the margin tomentose, strongly recurved; stamens 20 or more, about equalling the petals, toward the base pilose like the receptacle; disk flat, irregularly lobed, small. Pistillate flowers: the calyx more deeply parted, the segments 4 mm. long, oval, acute, ribbed, the margins

strongly revolute; petals (?); disk annular, obscurely lobed, bearing subulate pilose glands in the sinuses; ovary long and densely stellate-hairy, the styles bifid to below the middle.

Yungas, 1890 (375). Near *C. celtidifolius* Baill.

Croton pungens Jacq. Ic. Pl. Rar. 3: 19. *t. 622* (?) Yungas, 1890 (278).

Acalypha macrostachya Jacq. Hort. Schoenb. 2: 63. *t. 245* (?) Yungas, 1890 (217).

Acalypha diversifolia Jacq. Hort. Schoenb. 2: 63. *t. 244.* Yungas, 1890 (377).

ACALYPHA HIBISCIFOLIA Britton, sp. n.

Fruticose, finely tomentose, leafy, the branches erect or ascending, angular, glabrate; stipules 1 cm. long, 2.5 mm. broad, tapering from the base, acute; petioles 3–6 cm. long, channelled above; blade 2–2.5 dm. long, 4–6 cm. broad, ovate, the base slightly cordate, the apex abruptly or gradually acuminate, serrate-dentate, the teeth small and numerous, mostly short and broad with a minute point, membranaceous, strigose-pubescent above, the veins underneath narrow but prominent, much reticulated; spike (but one seen) terminal, sessile, 7 cm. long, 1 cm. broad, pistillate, loosely flowered at the base, the scales light-brown, membranaceous, the body inversely triangular, 3 mm. long and broad, bearing about 3 stout prominent dark brown ciliate ribs, which are extended into tapering acute fimbriate awns mostly longer than the body; flowers not examined; capsules glabrous, sub-globular, 2–2.5 mm. long; seed 1.5 mm. long, 1 mm. broad, ovoid, slightly compressed, light brown with a dark broadly circular plane caruncle.

Yungas, 1890 (242) = Rusby's 1275, the type.

ACALYPHA CAPILLARIS sp. n.

Tall shrub, the branches slender, ascending, elongated, reddish-gray, terete, minutely puberulent; petioles 2–6 cm. long, slender, the stipules subulate, attenuate, erect, rigid, 6 mm. long, the blades 10–15 cm. long, 3–7 cm. broad, the base rounded, the apex long-acuminate, sharply serrate, glabrous both sides, scrobiculate and pilose in the axils underneath, much reticulate with dark veins, the primary about 8 pairs, thin and membranaceous; staminate spikes filiform, elongated, the persistent bracts dark, thick, rigid, pilose, triangular, acuminate, equalling the flowers; glomerules about 4-flowered, the flowers dark-brown, very small, the stamens 8, the pedicels at length elongated, pilose; pistillate spikes terminal, solitary, simple, not more than 1 cm. broad; bracts very broad, enclosing a single flower, ribbed, the ribs terminating in long unequal

barbellate awns, the longest 7–8 mm. long; calyx small, about equalling the pilose ovary; styles as long as the bracts, or nearly so, scantily fimbriate, unequal; fruit not seen.

Yungas, 1890 (676.) Collected also by Pearce at Santa Cruz, Feb. 1865. Near *A. diversifolia* Jacq.

Alchornea triplinervia Muell. Arg. in DC. Prodr. 15: 2, 909. Yungas, 1890 (210).

Ricinus communis L. Sp. Pl., 1007. Unduavi, Mar. 1891 (742).

Mabea angustifolia Benth. in Hook. Journ. Bot. 1854, 365, var. LONGIFOLIA Britton, Ms.

In all respects smaller than the type, the leaves 4–10 cm. long, exclusive of the petiole, 5–10 mm. broad, the base sub-rounded, the apex contracted and long-attenuate, very acute.

Yungas, 1890 (507).

Maprounea Guianensis Aubl. Pl. Gui. 2: 895. *t. 342.* Songo, Nov. 1891 (831).

URTICACEAE.

Urtica flabellata H.B.K. Nov. Gen. 2: 40. Vic. La Paz, 1889 (127).

Urtica subincisa Benth. Pl. Hartw. 293. Talca Chugiaguilla, Apr. 1890 (803).

Urera sinuata Wedd. Ann. Sci. Nat. (III.) 18: 201. Yungas, 1890 (369).

Urera alceaefolia Gaud. Freyc. Voy. Bot. 497 (1826). (*U. aestuans* Steud. Nom. Ed. 2, 2: 737, but as *nomen nudum.*) Yungas, 1890 (420).

Pilea dauciodora Wedd. Ann. Sci. Nat. (III.) 17: 223. Yungas, 1890 (687).

Pilea anomala Wedd. Ann. Sci. Nat. (III.) 17: 217. Songo, Nov. 1890 (894)= Mandon's 1104.

Boehmeria caudata Sw. Prod. Veg. Ind. Occ. 34. Yungas, 1890 (445).

Boehmeria near *B. Pavonii* Wedd. Ann. Sci. Nat. (IV.) 1: 202. Yungas, 1890 (328)= Spruce, Tarapota, 3962. Clearly distinct from *B. Pavonii,* but better material required for description.

Phenax ballotaefolius (Kunth) Wedd. Ann. Sci. Nat. (IV.) 1: 192. Yungas, 1890 (475).

PHENAX PALLIDA sp. n.

Slender shrub, the branchlets elongated, spreading, slender, terete, purple, striate, above clothed with divergent soft white hairs; petioles stout, 5–10 mm. long, blades 5–10 cm. long, 2–3 cm. broad, oblong, the base acute, the apex acuminate, flabellately tricostate, penni-veined so as to connect the ribs, sharply serrate, thickish and rigid, above finely strigose, dark green, beneath very pale, hispid-hairy; glomerules closely sessile, solitary in the axils and clothing the leafless branchlets, 4–5 mm. in diameter, brown; bracts broadly ovate, about as long as the staminate flowers, hyaline, 3-nerved; staminate flowers forming a globose bud, anthers 4, rudimentary pistil little larger than an anther, the stigma nearly as large as the ovary; pistillate flower very-short-stalked, 1.5 mm. long, light brown, shining, narrowly margined, the subulate style and stigma about as long as the ovary.

Yungas, 1890 (341).

CERATOPHYLLEAE.

Ceratophyllum demersum L. Sp. Pl. 992. Talca Chugiaguilla, Apr. 1890 (800).

GNETACEAE.

Ephedra Americana Willd. Sp. 4: 860. Vic. La Paz, 10,000 ft. 1889 (9).

HYDROCHARIDEAE.

Elodea Chilensis Casp. Abhandl. Berl. Acad. 1857: 47. Lake Titicaca, 1890 (165).

ORCHIDEAE.

(Communicated by Mr. R. A. Rolfe.*)

PLEUROTHALLIS YUNGASENSIS Rolfe n. sp.

Stems slender, terete, about a foot high. Leaf oblong-lanceolate, acuminate, with subcordate base, 6–8 in. long, 1¼–1¾ in. broad. Flowers fascicled from a little above the base of the leaf; pedicels slender, 2–2½ in. long. Dorsal sepal ovate, acute, 7–9 lin. long, 4–5 lin. broad; lateral sepals connate, elliptical-oblong, acute, 9–12 lin. long, 6–8 lin. broad. Petals subulate-lanceolate, acute, base subcordate, 3½ lin. long, 1 lin. broad. Lip reniform-

*As this communication is accepted in the form submitted by Mr. Rolfe, the same rules of nomenclature do not apply as those which determine the names elsewhere.

H. H. R.

cordate, obtuse or apiculate, denticulate, tricarinate, 2 lin. broad. Column short.

Yungas 1890 (459).

A species belonging to the section Macrophyllae fasciculatae, and allied to *P. ruberrima* Lindl., a native of New Granada and Venezuela, but readily distinguished by the more distinctly cordate lip and the shorter and broader dorsal sepal.

Pleurothallis densifolia Rolfe n. sp.

Leaves oblanceolate-linear or subspatulate, obtuse, base attenuate into the short petiole, 1¼–1½ in. long, 1½–2 lin. broad. Scapes slender, 3½–4 in. long, 6–8-flowered; pedicels slender, 4–6 lin. long. Bracts triangular, acute, with funnel-shaped base, ¼ lin. long. Dorsal sepal ovate-lanceolate, acuminate, concave at the base, 3 lin. long; lateral ones connate, similar in shape, but rather longer. Petals obovate-oblong, obtuse, membranaceous, 1 lin. long. Lip entire, oblong, obtuse, tricarinate, 1¼ lin. long. Column broadly winged, rather shorter than the petals.

Yungas, 1890 (216).

A species belonging to the section Apodae caespitosae, and allied to *P. picta* Lindl., a native of British Guiana, but different in its rather narrower leaves, longer tails to the sepals, and larger petals, which are not spatulate.

Pleurothallis scabridula Rolfe n. sp.

Stems erect, slender, scabrid, leafy, 1½–2 in. long, the sheaths with free ovate scabrid-ciliate spreading limb. Leaves elliptical-oblong, obtuse, 2½–4 lin. long, 1–2 lin. broad. Racemes slender, 1–1½ in. long, 5–8-flowered. Bracts minute. Pedicels slender, 3 lin. long. Dorsal sepal oblong-lanceolate, caudate, acuminate, 2¼ lin. long; lateral sepals linear-caudate, 3 lin. long. Petals lanceolate-linear, acute, ½ lin. long. Lip linear-oblong, ½ lin. long. Column nearly equalling petals.

Songo (907).

A species belonging to the section Caulescentes, and allied to *P. diptera* Lindl., but less than half the size and more than twice as slender.

Stelis Bangii Rolfe n. sp.

Stems 1½–2½ in. long, clothed with two or three long tubular sheaths. Leaves linear-oblong, subobtuse, base attenuate, 2½–4 in. long, 5–9 lin. broad. Spikes solitary, 5–9 in. long. Bracts distichous, conduplicate, ovate, acuminate, 3–5 lin. long. Pedicels 1½–2 lin. long. Perianth 3 lin. in diameter, lobes short, very broadly

ovate, 7-nerved. Petals reniform-ovate, very obtuse, ¾ lin. in diameter. Lip like petals, but slightly smaller.

Yungas, 1890 (458).

Allied to *S. triplicata* Lindl. of the section Distichae, but readily distinguished by its narrower leaves and narrower and more acuminate bracts.

Stelis euspatha Reichb. f. in Bonplandia, 3: 225? Lindl. Fol. Orch. Stelis, 3.

Yungas, 1890 (653).

The buds of this specimen are very young, but so far as I can make out it belongs to this species, which was based on a Bolivian plant collected by Bridges.

Stelis Brittoniana Rolfe n. sp.

Stems 3 in. long. Leaves linear-oblong, obtuse, 2–4 in. long, 5–7 lin. broad. Spikes one or two from the leaf axil, 3–5 in. long. Bracts broadly ovate, acute, 1 lin. long. Pedicels a little longer than bracts. Perianth 3 lin. in diameter, lobes elliptical-oblong, obtuse, 3-nerved. Petals broadly oblong, truncate, ¼ lin. long. Lip similar to petals, but very obscurely 3-lobed.

Yungas, 1890 (739).

A species obviously allied to the Venezuelan *S. lutea* Lindl., though the spikes are frequently more than one from each leaf-axil. The fact is Lindley's groups Monostachyae and Polystachyae cannot be retained, not being constant, even for the same species. The present plant may be distinguished from *S. lutea* by its narrower sepals and different bracts.

Stelis Rusbyi Rolfe n. sp.

Stems 1½–3 in. long. Leaves oblong or linear-oblong, obtuse, 2–4 in. long, 5–11 lin. broad. Spike solitary, 4–6 in. long. Bracts ovate-lanceolate, acuminate, 3–4 lin. long. Pedicels 1½ lin. long. Dorsal sepal ovate, subacute, 5-nerved, 3 lin. long, 2 lin. broad; lateral ones connate into a broadly ovate 9-nerved body, 2½ lin. long, 2 lin. broad, apex minutely bidentate. Petals very broadly ovate, obtuse, 3-nerved, 13 lin. long. Lip similar but rather smaller, with thicker nerves, and somewhat auricled at the sides.

Yungas, 1890 (332) = Rusby's 2758.

A member of the section Dialissa, allied to the Peruvian *S. truncata* Lindl., which, however, is distinctly scandent, and has differently shaped petals and lip.

Liparis elata Lindl. Bot. Reg. 14 : *pl. 1175.*
Yungas, 1890 (608).

Liparis elliptica Reichb. f. in Walp. Ann. 6 : 218.
Yungas, 1890 (656).

Microstylis fastigiata Reichb. f. Yungas, 1890 (456 and 590.) Also collected at Cochabamba, 1891.

Bletia Wageneri Reichb. f. Bonplandia, 2 : 22 (1854). Yungas, 1890 (455).

Elleanthus yungasensis Rolfe n. sp.

Stems 1 foot or more high. Leaves ovate-lanceolate, acuminate, 3½–7½ in. long, ¾–1½ in. broad. Spikes oblong, 3½ in. long. Bracts elliptical-oblong, subacute, 6–8 lin. long. Sepals lanceolate-oblong, acute, 4–4½ lin. long, 1½ lin. broad. Petals lanceolate-linear, acute, 4 lin. long, ¾ lin. broad. Lip suborbicular, retuse, 4 lin. long by nearly as broad, with one prominent rounded callus 1 lin. broad in the basal cavity. Column clavate, 3 lin. long.

Yungas, 1890 (658).

A species belonging to the section Calelyna, and allied to *E. conifer* Reichb. f., a native of Peru, of which, however, the callus is described as triangular, and the plant evidently different in other respects.

Epidendrum Ibaguense H.B.K. Nov. Gen. 1 : 352. Yungas, 1890 (243).

Epidendrum syringothyrsus Reichb. f. ex Hook. f. Bot. Mag. *pl. 6145.* Yungas, 1890 (633).

Epidendrum paniculatum R. & P. Syst. Veg. 243. Yungas, 1890 (635).

Epidendrum orconastes Reichb. f. Xenia Orch. 3 : 22. Capi, March, 1890 (763).

Epidendrum brachycladium Lindl. Fol. Orch. Epid. 60. Vic. Cochabamba, 1891 (743).

Epidendrum lanipes Lindl. Fol. Orch. Epid. 91. Yungas, 1890 (452).

Epidendrum yungasense Rolfe n. sp.

Stems terete, erect, 1–1¼ ft. high. Leaves oblong-lanceolate, acute, 1½–3½ in. long, ¼–¾ in. broad. Panicles lax, with

about one side branch, 2–2½ in. long, with two or three lanceolate sheaths at the base. Bracts linear-lanceolate, acuminate, 1–1½ lin. long. Pedicels slender, 4–5 lin. long. Sepals oblanceolate, acute, reflexed, strongly 3-nerved, 3 lin. long, ¾ lin. broad. Petals filiform, very slightly thickened at the apex, 3 lin. long. Lip adnate to column, 3 lin. broad, three-lobed; lateral lobes broadly rounded, falcately acute, minutely denticulate; front lobe deeply bipartite, with linear obtuse lobes. Column 1¾ lin. long.

Yungas, 1890 (572).

A member of the section Spathium, and apparently most allied to the Peruvian *E. parviflorum* Ruiz & Pavon, but a stouter plant with shorter and broader leaves, shorter bracts and other differences.

Govenia boliviensis Rolfe n. sp.

Leaves elliptical or elliptical-lanceolate, subobtuse, 11 in. long, 3¼–4½ in. broad; petioles 9–10 in. long. Scape 14 in. high, few-flowered. Bracts ovate-oblong, subobtuse, 3–4 lin. long. Pedicels 5 lin. long. Dorsal sepal broadly oblanceolate, acute, 7 lin. long; lateral ones falcate-oblong, subacute, 4 lin. long. Petals obovate-oblong, somewhat oblique, acute, 4 lin. long, 2½ lin. broad. Lip ovate, acute, submembranaceous, with three slender obtuse keels, 3 lin. long, nearly 2 lin. broad. Column clavate, 2½ lin. long.

Yungas, 1890 (609).

Allied to the Peruvian *G. tingens*, Poepp. & Endl., but the lip scarcely half the size, in which respect it approaches *G. Gardneri* Hook., though the lip is not nearly so membranaceous.

Zygopetalum intermedium Lodd. var. *Peruvianum* Rolfe, in Lindenia, 9: 71. *pl. 418.* Yungas, 1890 (453).

Xylobium varicosum (Reichb. f.) Rolfe. (*Maxillaria varicosa* Reichb. f.). Yungas, 1890 (573).

Lycaste macrophylla Lindl. Yungas, 1890 (454).

Maxillaria nervosa Rolfe n. sp.

Rhizome creeping, clothed with broadly ovate obtuse striate somewhat imbricating sheaths. Pseudobulbs ½–¾ in. distant, oblong, subcompressed, 2-leaved. Leaves linear-oblong, emarginate, 1¼–2 in. long, 2–3 lin. broad. Peduncles 1½–1¾ in. long, clothed with about six or eight somewhat imbricating bract-like sheaths. Bracts oblong-lanceolate. acute, conduplicate-concave, striate, 5 lin. long. Sepals oblong-lanceolate, acute, 5–6 lin. long, closely striate-nerved and subcoriaceous. Petals linear-lanceolate, acute or acuminate, in texture like the sepals, 4 lin.

long. Lip obscurely 3-lobed, 3 lin. long; lateral lobes erect, obtusely rounded, front lobe reflexed, lanceolate, acute, crest linear, fleshy, equalling lateral lobes. Column clavate, 2½ lin. long.

Yungas, 1890 (457). Alzo Brazil, near Rio Janeiro, Glaziou, n. 11612, 20513; Prov. Minas, Glaziou, n. 20512; Organ Mountains, Miers.

Near *M. acuminata* Lindl., but a far smaller plant in every respect. I fail to identify this well marked species with any published description, though being also a Brazilian species I expected to find a name for it.

Camaridium longibracteatum Lindl. Pl. Hartw. 154. Yungas, 1890 (478).

Camaridium boliviense Rolfe n. sp.

Stems erect, somewhat elongated, leafy. Pseudobulbs 1–1½ in. distant, lanceolate-oblong, ¾–1 in. long, apex 2-leaved, base about 4 to 6-leaved. Leaves erect, linear, obtuse, unequally bidentate, 2–3½ in. long, 1–1½ lin. broad, their bases broader, sheathing and imbricating. Flowers axillary, solitary, peduncles but little exserted from sheaths. Bract lanceolate, acute, 5–6 lin. long. Sepals oblong, acute, 5 lin. long. Petals linear-oblong, 5 lin. long. Lip linear-oblong, acute, entire, with a rather obscure oblong callus in the centre. Column clavate, 3 lin. long.

Yungas, 1890 (636).

Allied to *C. arbuscula* Lindl. and *C. Lawrenceanum* Rolfe, and about intermediate between them in habit.

Dichaea hamata Rolfe n. sp.

Stems erect, somewhat branched below, 5–7 in. long, leafy. Leaves distichous, lanceolate-linear, acute, somewhat recurved, ¾–1 in. long. Flowers axillary, slightly exserted from leaf-sheaths. Bracts ovate, acuminate, 2 lin. long. Sepals ovate-oblong, acute, 2 lin. long. Petals rather smaller than sepals, but otherwise similar. Lip as long as petals, basal half cuneate, apical half as broad as the lip's length, apex broadly rounded and apiculate, obscurely denticulate, and terminating behind on either side in a sagittate appendage; crest absent, but base of lip rather fleshy. Column very short. Fruit 2–2½ lin. long, setose-echinate.

Yungas, 1890 (602).

Allied to *D. graminifolia* Lindl. The lip is very curious, being somewhat hooked on either side and anchor-shaped.

Ornithidium giganteum Lindl. Capi, Mar. 1890 (764).

Odontoglossum rigidum Lindl. Vic. Cochabamba, 1891 (744).

Oncidium Rusbyi Rolfe n. sp.

Leaves linear-lanceolate, acute, 15 in. or more long. Panicle much elongated, branches 2–5 in. long, flexuose. Bracts broadly triangular-ovate, subobtuse, conduplicate, 2½ lin. long. Pedicels 8–11 lin. long. Sepals unguiculate, acuminate, undulate; dorsal one 3½–4 lin. long, with ovate-oblong limb; laterals 5–5½ lin. spreading, with linear-oblong limb, unguis united for a short distance at the base. Petals unguiculate, 3–3½ lin. long, limb ovate-oblong, acuminate, undulate. Lip entire, 3½ lin. long by nearly as broad; broadly trulliform-ovate, sides somewhat reflexed, apex suddenly attenuated, triangular, recurved; crest large, 5-lobed, the three terminal lobes subequal. Column 1½ lin. long, stout, apex somewhat reflexed; wings short, broadly rounded.

Yungas, 1890 (460).

A species belonging to the group Microchila cimicifera, and allied to *O. Trulla* Reichb. f., though different from every other in the shape of the bracts.

Brassia thyrsodes Reichb. f. Gard. Chron. 1868: 842 (*ex descr.*)

Yungas, 1890 (607).

Sobralia violacea Lindl. Yungas, 1890 (391 and 576).

Altensteinia Weddelliana Reichb. f. Xen. Orch. 3: 19. Talca Chugiaguilla, Apr. 1890 (819).

Altensteinia boliviensis Rolfe n. sp.

Leaves lanceolate, acute or subacute, 6–10 in. long, 1¼–1½ in. broad. Scapes 10–18 in. long. Spikes 4–5 in. long, dense. Bracts ovate or ovate-lanceolate, acute, 4–6 lin. long. Sepals lanceolate-oblong, obtuse, 3 lin. long. Petals linear, obtuse, 3 lin. long. Lip elliptical, obtuse, the margin fimbriate in numerous short appendages, 4 lin. long. Column 2½ lin. long.

Yungas, 1890 (820).

Allied to *A. fimbriata* H. B. et K., but a less vigorous plant, with distinctly smaller flowers.

Spiranthes Bangii Rolfe n. sp.

Roots fascicled, stout. Leaves cauline, lanceolate, acute, 4–6 in. long, ¾–1 in. broad, gradually reduced upwards into the bracts. Scapes 1¼–2½ ft. long, spikes 4–9 in. long. Bracts lanceolate or ovate-lanceolate, acuminate, 5–10 lin. long. Dorsal sepal oblong-lanceolate, subobtuse, concave, pubescent, 3½ lin. long; lateral ones lanceolate, subacute, 3½ lin. long. Petals lanceolate, subobtuse, equalling the dorsal sepal, with which they form a cucullate hood. Lip somewhat recurved, lanceolate-oblong, obtuse, crispo-undulate, its base united to the sides of the column

and somewhat saccate, 3½ lin. long; disc somewhat verrucose-reticulate. Column 1½ lin. long.

Songo, 1890 (920).

Allied to *S. plantaginea* Lindl.

SPIRANTHES YUNGASENSIS Rolfe n. sp.

Roots fascicled. Leaves cauline, oblong-lanceolate, acute, 3 in. long, 8–10 lin. broad, gradually reduced upwards into the bracts. Scapes pubescent, 1¼ ft. long, spikes 3 in. long. Bracts linear-lanceolate, acuminate, 8–10 lin. long. Sepals pubescent, dorsal one oblong-lanceolate, subacute, 5 lin. long; lateral ones lanceolate-acuminate, 5 lin. long. Petals lanceolate, acute, the inner margin appressed to the dorsal sepal, and thus forming a cucullate hood. Lip somewhat recurved, oblong, obtuse, somewhat undulate, 4½ lin. long, margins united to column, base adnate to ovary, saccate. Column 3½ lin. long.

Yungas, 1890 (451).

Closely allied to *S. hirta* Lindl.

Habenaria hexaptera Lindl. Gen. & Sp. Orch. 316. Yungas (582).

Habenaria maculosa Lindl. Gen. & Sp. Orch. 399. Vic. Cochabamba (1239).

SCITAMINEAE.

Costus spicatus (Jacq.) Swartz, Prod. Veg. Ind. Occ. 11: (*Alpinia spicata* Jacq. Select. Stirp. Amer. Hist. *pl. 1*). Songo, Nov. 1890 (912).

Stromanthe spectabilis Lem. Jard. Fleur. 4: *pl. 401*. Yungas 1890 (513).

STROMANTHE AUGUSTIFOLIA sp. n.

Roots densely long white-hairy; culm slender, angled and finely many-striate, scurfy-tomentose on one side, especially below the bluish nodes; sheaths of the lower leaves 4 dm. long, broad and sheathing below, gradually narrowed above and becoming separate and terete, finely and sharply many-ribbed, above sparsely pilose and scurfy, the blades elongated, in the dry much involute condition only about 5–10 mm. broad, glabrous, light-green, finely and beautifully transverse-striate, the straw-colored mid-rib strong and prominent; peduncles very slender, erect or erect-spreading, the lower reaching 5 dm. in length; bracts indigo-blue at the base, exceeding their branches, acute; rhachis and

branches strongly hollowed on the side next the flower, with nodose axils; outer bractlets indigo-blue, at least when young, 1.5–3 cm. long, 3–5 mm. broad in the folded condition, very finely many-nerved, acute or obtuse, when opened 1–1.5 cm. broad, oval, the inner colorless, hyaline and successively smaller; bud 6–7 mm. long; flowers very short-pedicelled, the brown ovary 1 mm. long, turbinate, truncate, strongly tuberculate, the tubercles in 10 rows; sepals similar to the inner scales, 7 mm. long, 4.5 mm. broad, oval, elliptical; petals purple-blue, 6 mm. long, 2–5 mm. broad; lip 5 mm. broad, triangular-obovate, irregularly about 5-lobed, one lobe yellow, antheroid, the inner face at one edge appendaged with a thick gland; anther oval-oblong, 1 mm. long, its filament posteriorly appendaged near the summit with two membranaceous oblong lobes; stigma thickened, cupulate, oblique, its style much flattened.

Songo, Nov. 1891 (874).

Heliconia hirsuta L. f., var. *cannoidea* (Richard) Baker, Annals of Botany, 7: 197. Yungas, 1890 (411).

BROMELIACEAE.*

Pitcairnia consimilis Baker, Journ. Bot. 19: 269 (1881). Vic. La Paz, 10,000 ft. 1890 (152)=Rusby's 2847.

Pitcairnia (*Puyopsis*) sp. near *P. coerulea* Benth. Songo, Nov. 1890 (892).

Pitcairnia (*Phlomostachys*) sp. near *P. Funkiana* Regel. Yungas, 1890 (592).

Tillandsia usneoides L. Sp. Pl. 287. Vic. La Paz, 10,000 ft. 1889 (107).

Tillandsia propinqua Gay, Fl. Chile, 6: 15. Vic. La Paz, 10,000 ft. 1889 (123).

Tillandsia sphaerocephala Baker, Journ. Bot. 26: 141 (1888). Vic. La Paz, 10,000 ft. 1889 (159).

Tillandsia (Platystachys) Boliviensis Baker sp. n.

Foliis dense rosulatis, e basi ovata lineari-acuminatis, dorso dense albido-lepidotis, pedunculo brevi, spica simpli oblonga, bracteis floralibus ovato-navicularibus glabris, calyce bractea paulo breviori sepalis lanceolatis glabris dorso convexis.

Folia 6–8 poll. longa, bractea 12–15 lin. longa. Vic. La Paz, 10,000 ft. 1890 (159a). Near *T. canescens* Sw. and *T. achyrostachys* E. Morren.

* Kindly determined by Mr. J. G. Baker.

IRIDEAE.

Sisyrinchium iridifolium H.B.K. Nov. Gen. 1: 324. Yungas, 1890 (623). Vic. Cochabamba, 1891 (999)? = Rusby's 695.

Sisyrinchium alatum Hook. Ic. Pl. *pl. 219*. Yungas, 1890 (623a).

AMARYLLIDEAE.*

ZEPHYRANTHES XIPHOPETALA Baker sp. n.

Bulb globose, 1¼–1½ in. diam.; outer tunics brown, membranous; leaves not seen, probably not developed at the same time as the flowers; peduncle ½–1 foot, bearing a single subsessile erect flower; spathe white, membranous, 1-valved, under an inch long; perianth erect, infundibuliform, bright yellow, 1½–2 in. long; tube ⅓ in. long, cylindrical below the dilated apex; segments lanceolate, ⅙ in. broad at the middle, narrowed gradually to an acute apex; stamens about half as long as the perianth-lobes; anthers curling up spirally; style deeply trifid, overtopping the anthers.

Vic. Cochabamba, 1891 (890).

The only other species known with a sessile flower and trifid style is *Z. verecunda* Herb. in Bot. Mag. *pl. 2583* = *Z. sessilis* Herb., a Mexican species with white flowers.

Elisena ringens (R. & P.) Herb. Amaryll. 201 (?) (*Pancratium ringens* R. & P. Fl. Per. 3: 53. *pl. 283*.) Songo, Nov. 1890 (918). Specimens too incomplete for positive determination.

Bomarea multiflora (L.) Mirbel, Hist. Nat. Pl. 9: 72 (1804). Yungas, 1890 (593, 723 and 724).

Bomarea edulis (Tussac) Herb. Amaryll. 111. Yungas, 1890 (593a) = Rusby's 568.

Bomarea acutifolia (Link & Otto) Herb. Amaryll. 112. Yungas, 1890 (593b) = Rusby's 599.

Bomarea Herbertiana Baker, Handb. Amaryll. 155 (*B. formosissima* Herb. et Benth., not [R. & P.] Griseb.) Yungas, 1890, (724b).

LILIACEAE.

Asphodelus fistulosus L. Sp. Pl. 309. Vic. La Paz, 10,000 ft., 1889 (133).

* Kindly determined by Mr. J. G. Baker.

Nothoscordum andicolum Kunth, Enum. 4 : 463. Vic. La Paz, 10,000 ft., 1889 (187).

COMMELINACEAE.

Commelina gracilis R. & P. Fl. Per. 1 : 44. *pl. 72. f. a.* Yungas, 1890 (463).

Commelina elliptica H.B.K. Nov. Gen. 1 : 259 (*C. variabilis* Schlecht.) Capi, Mar. 1890 (782) = Mandon's 1241 and Rusby's 848.

Dichorisandra Aubletiana Schult. f. Syst. 7 : 1181. Yungas, 1890 (509).

Tinantia fugax Scheidw. Allgem. Gart. 7 : 365 (1839). Yungas, 1890 (289 and 733).

Tradescantia multiflora Sw. Prod. Veg. Ind. Occ. 57. Yungas, 1890 (603) = Rusby's 1369.

JUNCACEAE.

Juncus andicolus Hook. Ic. Pl. *pl. 714.* Vic. La Paz, 10,000 ft. 1889 (89).

Juncus brunneus Buchen. in Bremen Abh. 6 : 403 (1879). Vic. La Paz, 10,000 ft. 1889 (73).

Juncus Chamissonis Kunth, Enum. 3 : 348. Vic. La Paz, 10,000 ft. 1889 (116) = Rusby's 181.

PALMAE.*

Geonoma baculifera Kunth, Enum. 3 : 233. Songo, Nov. 1891 (877).

AROIDEAE.

Caladium sp., apparently undescribed, but material insufficient. Songo, Nov. 1890 (920).

Xanthosoma roscum Schott, Oest. Bot. Zeitsch. 1858 : 178.

CYPERACEAE.†

Cyperus Meyenianus Kunth, Enum. 2 : 49. Yungas, 1890 (263).

Cyperus flavomariscus Griseb. Pl. Lorentz. 264 (in reprint paged 217). Yungas, 1890 (410).

Cyperus ferax Rich. Act. Soc. Hist. Nat. Par. 1 : 106 (1792). Yungas, 1890 (529).

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* Determined by Mr. Charles Wright.

† Species marked by an asterisk determined by Mr. C. B. Clarke.

Cyperus Luzulae Rottb.; Willd. Sp. Pl. 1: 276. Yungas, 1890 (531).

**Cyperus Martianus* Schrad.; Nees in Mart. Fl. Bras. 2: 32. Yungas, 1890 (528).

**Cyperus laevigatus* L. Mant. 2: 176 (*C. reptans* Boeck. fide Clark). Vic. La Paz, 1890 (186).

**Cyperus phaeocephalus* Griseb. Goett. Abh. 19: 264. Vic. La Paz, 10,000 ft. 1889 (95 and 95a) = Spruce's 5904.

**Cyperus seslerioides* H.B.K. Nov. Gen. 1: 209. Vic. Cochabamba, 1891 (995).

**Kyllingia odorata* Vahl, Enum. 2: 382. Yungas, 1890 (581).

**Eleocharis albibracteata* Nees et Meyen; Kunth, Enum. 2: 143. Vic. La Paz, 10,000 ft. 1889 (71a).

**Eleocharis montana* Roem. & Sch. Syst. 2: 153. Vic. La Paz, 1890 (144). Vic. Cochabamba, 1891 (996).

Dichromena nervosa Vahl, Enum. 2: 241. Yungas, 1890 (251) = Rusby's 109.

Fimbristylis laxa Vahl, Enum. 2: 292. Yungas, 1890 (530) = Rusby's 71.

Stenophyllus capillaris (L.) Britton, Bull. Torr. Bot. Club, 21: 30. Yungas, 1890 (306).

Stenophyllus sphaerolepis (Boeck.) Britton. (*Scirpus sphaerolepis* Boeck.) Yungas, 1890 (432).

**Scirpus asper* Presl, Rel. Haenk. 1: 194. Capi, Mar. 1890 (765).

**Scirpus cernuus* Vahl, Enum. 2: 245. Vic. La Paz, 10,000 ft. 1889 (71).

Scirpus Americanus Pers. Syn. 1: 68. Vic. Cochabamba, 1891 (997).

**Rynchospora glauca* Vahl, Enum. 2: 233. Yungas, 1890 (433).

Rynchospora globosa (H.B.K.) R. & S. Syst. 2: 89. Vic. Cochabamba, 1891 (873).

**Pleurostachys Urvillei* Brongn. Duperr. Voy. Bot. 173. *pl. 31.* Vic. Cochabamba, 1891 (871).

Scleria pleostachya Kunth, Enum. 2: 355. Yungas, 1890 (203).

Scleria bracteata Cav. Ic. 5: 34. *pl. 457.* Yungas, 1890 (262).

Carex festiva Dewey, Am. Journ. Sci. 19: 246 (1835). Vic. La Paz, 10,000 ft., 1889 (62).

GRAMINEAE.

(Report expected from Mr. F. L. Scribner.)

MARSILEACEAE.

Azolla Caroliniana Willd. Talca Chugiaguilla, Apr. 1890 (790).
Azolla filiculoides Lam. Vic. Cochabamba, 1891 (983).

SELAGINELLACEAE.

Selaginella Poeppigiana Spreng. Yungas, 1890 (577) = Rusby's 452.
Selaginella Moritziana Spreng. (?) Yungas, 1890 (440).
Selaginella mnioides A. Br. Songo, 1890 (909) = Rusby's 460.

LYCOPODIACEAE.

(Communicated by Mrs. E. G. Britton.)

Lycopodium complanatum L, Yungas, 1890 (395).
Lycopodium cernuum L. Yungas, 1890 (396) = Rusby's 447.
Lycopodium tenuifolium L. Yungas, 1890 (637) = Rusby's 449.
Lycopodium reflexum Lam. Yungas, 1890 (638).
Lycopodium clavatum L. Yungas, 1890 (320).

FILICES.

(Communicated by Mrs. E. G. Britton.)

Gleichenia pubescens H.B.K. Yungas, 1890 (303).
Cyathea Schansin Mart. Yungas, 1890 (562).
Alsophila pubescens Baker. Yungas, 1890 (563) = Spruce's 4712.
Alsophila pruinata Kaulf. Yungas, 1890 (484).
Woodsia mollis J. Sm. Yungas, 1890 (302).
Woodsia Peruviana Hook. Songo, 1890 (878) = Rusby's 338.
Hymenophyllum ciliatum Sw. Yungas, 1890 (436 and 349 p. p.) = Rusby's 135. Songo, Nov. 1890 (904).
Hymenophyllum protrusum Hook. Yungas, 1890 (349b) = Rusby's 186.
Hymenophyllum crispum H.B.K. Songo, Nov. 1890 (900) = Spruce's 4693.
Hymenophyllum axillare Sw. Songo, Nov. 1890 (902) = Pearce's 243, Lechler's 2250, Spruce's 5420, and Couthoy's 65 from Quintensian Andes, 1853.

Hymenophyllum polyanthos Sw. Songo, Nov. 1890 (897 and 903) = Rusby's 183 and (?) Spruce's 4696.
Hymenophyllum tenerrimum V. D. B. Songo, Nov. 1890 (with 899) = Spruce's 4702.
Hymenophyllum microcarpum Desv. Yungas, 1890 (555) = Rusby's 137.
Trichomanes crinitum Sw. Songo, Nov. 1890 (906), ex. descr.
Trichomanes crispum L. Songo, Nov. 1890 (898) = Rusby's 184.
Trichomanes rigidum Sw. Songo, Nov. 1890 (899).
Trichomanes reptans Sw. Yungas, 1890 (with 555).
Trichomanes radicans Sw. Yungas, 1880 (555).
Lindsaya stricta Dry. (?) Songo, Nov. 1890 (905), ex. descr.
Adiantum decorum Moore. Vic. La Paz, 10,000 ft. 1889 (112).
Adiantum Aethiopicum L. Yungas, 1890 (559).
Adiantum cuneatum L. f. Yungas, 1890 (211).
Cheilanthes pilosa Goldm. Yungas, 1890 (564).
Pellaea ternifolia Fee. Vic. La Paz, 10,000 ft. 1889 (91). Talca Chugiaguilla Apr. 1890 (817).
Pteris pedata L. Yungas, 1890 (212) = Rusby's 112.
Lomaria Boryana Willd. Yungas, 1890 (663).
Blechnum asplenioides Sw. Yungas, 1890 (435) = Rusby's 315.
Asplenium fragrans var. *foeniculaceum* Kaulf. Yungas, 1890 (662) = Rusby's 392.
Nephrolepis exaltata Schott. Yungas, 1890 (291) = Rusby's 411.
Polypodium aureum L. Yungas, 1890 (362).
Polypodium aureum L., var. *areolatum* Eaton. Yungas, 1890 (378).
Polypodium glaucophyllum Kunze. Yungas, 1890 (437).
Polypodium serrulatum Mett. Yungas, 1890 (561). Songo, Nov. 1890 (907 a) = Rusby's 368 and 369.
Polypodium suspensum L. Yungas, 1890 (483) = Rusby's 375.
Polypodium cultratum Willd. Yungas, 1890 (556).
Polypodium subsessile Baker. Yungas, 1890 (557) = Rusby's 379.
Polypodium Plumula H.B.K. Songo, Nov. 1890 (901) = Rusby's 366 and 367.
Polypodium piloselloides L. Yungas, 1890 (734).
Polypodium rigescens Bory. Songo, Nov. 1890 (901c) = Spruce's 5279.
Polypodium taeniosum Willd (*P. angustifolium* Sw.) Vic. La Paz, 10,000 ft., 1889 (140).

Polypodium apiculatum Kunze. Songo, Nov. 1890 (901b).
Notholaena sinuata Kaulf. Talca Chugiaguilla, Apr. 1890 (786).
Notholaena ferruginea Hook. Yungas (205). Talca Chugiaguilla, (787). La Granga (752) = Rusby's 332, 333, 335 and 336.
Monogramme graminoides Baker, Syn. Fil. 375. Songo, Nov. 1890 (907b).
Gymnogramme calomelanos Kaulf. Yungas, 1890 (244).
Gymnogramme angustifrons Baker. Yungas, 1890 (693).
Gymnogramme tartarea Desv. Yungas, 1890 (305).
Gymnogramme retrofracta Hook. & Grev. Yungas, 1890 (661) = Rusby's 128.
Meniscium serratum Cav. Yungas, 1890 (554) = Rusby's 412.
Vittaria stipitata Kunze. Yungas, 1890 (353) = Rusby's 340.
Acrostichum cuspidatum Willd. Yungas, 1890 (434a).
Acrostichum latifolium Sw. Yungas, 1890 (434).

Acrosticum Moorei E. G. Britton sp. n.

Rhizomes slender, purple, sparsely beset with brown scales and fibrillose radicles; sterile fronds 3–5 inches long, pinnately divided almost to the midvein into 18–20 slender bifurcating segments; stipes 2–3 inches long, grooved and sparingly beset with lower scales; fertile fronds on longer stipes, 3–4 inches long, blade short, less than 1 inch long by ¼ inch broad, crenately lobed with 6 or 8 shallow sinuses on each side.

Yungas, 1890 (558).

Belonging to the section Polybotrya H.B.K., differing from its nearest ally, *A. bifurcatum*, in having the fertile frond almost entire, not pinnately parted, and the rhizome more slender and creeping, less tufted in habit.

Collected also by W. Lechler, near Sachapata, on trunks of trees, and distributed as No. 2609, Plantae Peruvianae. Seen at Kew in Thomas Moore's fern herbarium, labelled "*Indeterm.* Mett. n. sp.?"

Anemia tomentosa Sw. Yungas, 1890 (304) = Rusby's 118.
Anemia tomentosa var. *fulva* H.B.K. Yungas, 1890 (438).
Anemia tomentosa var. (?). Yungas 1890 (439).
Lygodium venustum Sw. Yungas, 1890 (560) = Rusby's 144.

MUSCI.

(Communicated by Mr. Charles Wright.)

Sphagnum acutifolium Ehrh. Yungas, 1890 (481 and 569).

Pogonatum tortile Swz. Songo, Nov. 1891 (908).
Polytrichum juniperinum Hedw. Yungas, 1890 (280).
Bryum Beyrichianum C. Müll (?). Yungas, 1890 (566).
Phyllogonium viscosum Mitt. Yungas, 1890 (565).
Thuidium delicatulum Lindberg. Yungas, 1890 (482).

HEPATICAE.

(Communicated by Mr. Charles Wright.)

Frullania atrata Nees. Yungas, 1890 (567).
Radula Xalapensis Nees et Mart. (?) Yungas, 1890 (511a).
Isotachis Sp. Yungas, 1890 (713, a).
Micropterygium vulgare Nees. Songo, Nov. 1890 (908a).
Marchantia polymorpha L. Songo, Nov. 1890 (910).
Reboulia hemispherica Raddi. Yungas, 1890 (605).

LICHENES.

(Communicated by Dr. J. W. Eckfeldt.)

Baeomyces imbricatus Hook. Yungas, 1890 (713).
Cladonia rangiferina (L.) Hoff. Vic. La Laz, 10,000 ft. 1889 (20, a).
Cladonia ceratophylla Eschw. (Sterile.) Yungas, 1890 (568).
Cladonia peltata Spreng. (Sterile.) Yungas, 1890 (570). (Kindly determined by Dr. H. Mueller.)
Peltigera canina Hoffm. Yungas, 1890 (296.)
Theloschistes chrysophthalmus (L.) Norm. Vic. La Paz, 10,000 ft. 1889 (135, a).
Usnea barbata (L.) Fr. Vic. La Paz, 10,000 ft. 1889 (135.
Stereocaulon virgatum Nyl. Vic. La Paz. 10,000 ft. 1890 (225).

FUNGI.

(Communicated by Mr. Charles Wright.)

Stereum caperatum Berk. Yungas, 1890 (295).

ALGAE.

(Communicated by Mr. Charles Wright.)

Rhizoclonium sp. (other Algae are also intermixed). Vic. La Paz, 10,000 ft. 1890 (164).
Enteromorpha intestinalis Link.
Rhizoclonium sp. Vic. La Paz, 10,000 ft. 1890 (166).

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